

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

ARTICLE 33.1-03 IS CREATED AS FOLLOWS, SUBJECT TO THE CONTINGENCY IN S.L.
2017, CH. 199, 75:

ARTICLE 33.1-03

WATER WORKS AND SEWERAGE SYSTEMS

Chapter

33.1-03-01 [Reserved]

33.1-03-02 [Reserved]

33.1-03-03 [Reserved]

33.1-03-04 [Reserved]

33.1-03-05 [Reserved]

33.1-03-06 [Reserved]

33.1-03-07 [Reserved]

33.1-03-08 Approval of Plans and Specifications Prior to Construction of Water Works and Sewerage Systems

CHAPTER 33.1-03-01

[RESERVED]

CHAPTER 33.1-03-02

[RESERVED]

CHAPTER 33.1-03-03

[RESERVED]

CHAPTER 33.1-03-04

[RESERVED]

CHAPTER 33.1-03-05

[RESERVED]

CHAPTER 33.1-03-06

[RESERVED]

CHAPTER 33.1-03-07

[RESERVED]

CHAPTER 33.1-03-08

APPROVAL OF PLANS AND SPECIFICATIONS PRIOR TO CONSTRUCTION OF WATER WORKS AND SEWERAGE SYSTEMS

Section

33.1-03-08-01 Plans and Specifications Required

33.1-03-08-02 Submission of Plans and Specifications for Review

- 33.1-03-08-03 Approval of Plans and Specifications
- 33.1-03-08-04 Approved Plans and Specifications Required

33.1-03-08-01. Plans and specifications required.

It is required that plans and specifications be prepared for all water works and sewerage systems contemplated for use by the general public. It is further required that such plans and specifications, together with other pertinent information, be submitted to the department of environmental quality for review prior to construction of the facility or facilities.

History: Effective _____, 2018.

General Authority: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 16

33.1-03-08-02. Submission of plans and specifications for review.

Plans and specifications shall be submitted to the department of environmental quality in accordance with such directions as the department may promulgate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 16

33.1-03-08-03. Approval of plans and specifications.

Plans and specifications reviewed by the department of environmental quality will be approved only when such plans and specifications fully meet and comply with existing statutes and sanitary standards established by the department of environmental quality. Plans and specifications upon which approval is being withheld will be returned with the reasons for withholding approval.

History: Effective _____, 2018.

General Authority: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 16

33.1-03-08-04. Approved plans and specifications required.

Water works and sewerage systems constructed for use by the general public must be constructed in accordance with plans and specifications approved by the department of environmental quality.

History: Effective _____, 2018.

General Authority: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 16

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-10 is created as follows, subject to the contingency in S.L. 2017, ch. 199, § 75:

ARTICLE 33.1-10
RADIOLOGICAL HEALTH RULES

Chapter

33.1-10-01 General Provisions

33.1-10-02 Registration of Radiation Machine Facilities and Services

33.1-10-03 [Reserved]

33.1-10-03.1 Rules of General Applicability to Domestic Licensing of Byproduct Material

33.1-10-04 [Reserved]

33.1-10-04.1 [Reserved]

33.1-10-04.2 Standards for Protection Against Radiation

33.1-10-05 [Reserved]

33.1-10-05.1 Radiation Safety Requirements for Industrial Radiographic Operations

33.1-10-06 X-Rays in the Healing Arts

33.1-10-07 [Reserved]

33.1-10-07.1 [Reserved]

33.1-10-07.2 Medical Use of Byproduct Material

33.1-10-08 Radiation Safety Requirements for Analytical X-Ray Equipment

33.1-10-09 Radiation Safety Requirements for Particle Accelerators

33.1-10-10 [Reserved]

33.1-10-10.1 Notices, Instructions, and Reports to Workers - Inspections

33.1-10-11 Fees for Issuance of License and Registration Certificates and Inspections

33.1-10-12 [Reserved]

33.1-10-12.1 Licenses and Radiation Safety Requirements for Well Logging

33.1-10-13 [Reserved]

33.1-10-13.1 Packaging and Transportation of Radioactive Material

33.1-10-14 [Reserved]

33.1-10-14.1 Licenses and Radiation Safety Requirements for Irradiators

33.1-10-15 Therapeutic Radiation Machines

33.1-10-16 Domestic Licensing of Source Material

33.1-10-17 Domestic Licensing of Special Nuclear Material

33.1-10-18 General Domestic Licenses for Byproduct Material

33.1-10-19 Reciprocal Recognition of Licenses

33.1-10-20 Specific Domestic Licenses to Manufacture or Transfer Certain Items
Containing Byproduct Material

33.1-10-21 Specific Domestic Licenses of Broad Scope for Byproduct Material

33.1-10-22 Physical Protection of Category 1 and Category 2 Quantities of
Radioactive Material

33.1-10-23 Regulation and Licensing of Technologically Enhanced Naturally
Occurring Radioactive Material

CHAPTER 33.1-10-01

GENERAL PROVISIONS

Section

33.1-10-01-01 Purpose

33.1-10-01-02 Scope

33.1-10-01-03 Authority

33.1-10-01-04 Definitions

33.1-10-01-05 Exemptions

33.1-10-01-06 Records

33.1-10-01-07 Inspections

33.1-10-01-08 Tests

33.1-10-01-09 Additional Requirements

33.1-10-01-10 Violations

33.1-10-01-11 Impounding

33.1-10-01-12 Prohibited Uses

33.1-10-01-13 Communications

33.1-10-01-14 Units of Exposure, Dose, and Activity

33.1-10-01-01. Purpose.

It is the purpose of this article to state such requirements as shall be applied in the use of all sources of ionizing radiation within North Dakota. This article provides for the protection of public health and maximum safety to all persons at, or in the vicinity of the place of use and storage of sources of ionizing radiation and in addition with respect to radioactive materials, or devices containing radioactive materials, the disposal thereof. This article is intended to be consistent with the best use of ionizing radiation.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-02. Scope.

Except as otherwise specifically provided, this article applies to all persons who receive, possess, use, transfer, own, or acquire any source of radiation, provided, however, that nothing in this article shall apply to any person to the extent such person is subject to regulation by the United States nuclear regulatory commission. Attention is directed to the fact that regulation by this state of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between this state and the United States nuclear regulatory commission and to part 150 of the commission's regulations [10 CFR part 150].

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-03. Authority.

The department of environmental quality has been authorized to provide and administer this article under the provisions of North Dakota Century Code chapter 23.1-03.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-04. Definitions.

As used in this article, these terms have the definitions set forth below. Additional definitions used only in a certain section will be found in that section. Terms not defined in this article shall have the meaning given them in North Dakota Century Code chapter 23.1-03.

1. "Absorbed dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.
2. "Activity" means the rate of disintegration or transformation or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).
3. "Becquerel" (Bq) means the SI unit of activity. One becquerel is equal to one disintegration or transformation per second (dps or tps).
4. "Byproduct material" means:
 - a. Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material; and
 - b. The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition.
5. "Calibration" means the determination of:
 - a. The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or
 - b. The strength of a source of radiation relative to a standard.
6. "CFR" means Code of Federal Regulations.

7. "Chelating agent" means amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxycarboxylic acids, and polycarboxylic acids (e.g., citric acid, carboic acid, and gluconic acid).
8. "Curie" means a unit of measurement of activity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7×10^{10} disintegrations or transformations per second (dps or tps).
9. "Department" means the department of environmental quality.
10. "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, "radiation dose" is an equivalent term.
11. "Dose equivalent (H_T)" means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.
12. "Dose limits" means the permissible upper bounds of radiation doses established in accordance with these rules. For purposes of these rules, "limits" is an equivalent term.
13. "Exposure" means being exposed to ionizing radiation or to radioactive material.
14. "Gray" (Gy) means the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram [100 rad].
15. "Hazardous waste" means those wastes designated as hazardous by United States environmental protection agency regulations in 40 CFR part 261 and article 33.1-24 of the North Dakota Administrative Code.
16. "Healing arts" means diagnostic or healing treatment of human and animal maladies including, but not limited to, the following which are duly licensed by the state of North Dakota for the lawful practice of: medicine and its associated specialties, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.
17. "Human use" means the internal or external administration of radiation or radioactive material to human beings.
18. "Inspection" means an official examination or observation including, but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements, and conditions of the department.
19. "License" means a general or specific license issued by the department in accordance with the regulations adopted by the department.
20. "Licensee" means any person who is licensed by the department in accordance with this article and North Dakota Century Code chapter 23.1-03.
21. "Licensing state" means any state with regulations equivalent to the Suggested State Regulations for Control of Radiation relating to, and an effective program for, the

regulatory control of NARM and which has been granted final designation by the conference of radiation control program directors, incorporated.

22. "Major processor" means a user processing, handling, or manufacturing radioactive material exceeding type A quantities as unsealed sources or material, or exceeding four times type B quantities as sealed sources, but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. The terms "type A quantity" and "type B quantity" are defined in chapter 33.1-10-13.1.
23. "Monitoring" means the measurement of radiation, radioactive material concentrations, surface area activities or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, "radiation monitoring" and "radiation protection monitoring" are equivalent terms.
24. "Natural radioactivity" means radioactivity of naturally occurring nuclides.
25. "Nuclear regulatory commission (NRC)" means the United States nuclear regulatory commission or its duly authorized representatives.
26. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing, other than the commission, or any successor thereto and other than federal government agencies licensed by the commission or any successor thereto.
27. "Protective apron" means an apron made of radiation-attenuating materials used to reduce exposure to radiation.
28. "Quality factor" (Q) means the modifying factor, listed in tables I and II of section 33.1-10-01-14, that is used to derive dose equivalent from absorbed dose.
29. "Rad" means the special unit of absorbed dose. One rad is equal to an absorbed dose of one hundred erg per gram or one one-hundredths joule per kilogram [0.01 gray].
30. "Radiation" means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, ionizing radiation is an equivalent term. Radiation, as used in these rules, does not include nonionizing radiation, such as radiowaves or microwaves, visible, infrared, or ultraviolet light.
31. "Radiation exposure" means the quotient of dQ by dm where "dQ" is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass "dm" are completely stopped in air. The SI unit of exposure is the coulomb per kilogram (C/kg). (See section 33.1-10-01-14 units of radiation exposure, dose, and activity for the special unit equivalent "roentgen" (R).)
32. "Radiation exposure rate" means the radiation exposure per unit of time, such as R/min, mR/h, etc.

33. "Radiation machine" means any device capable of producing radiation except, those devices with radioactive material as the only source of radiation.
34. "Radiation safety officer" means an individual who has the knowledge and responsibility to apply appropriate radiation protection requirements.
35. "Radioactive material" means any material (solid, liquid, or gas) which emits radiation spontaneously.
36. "Radioactivity" means the disintegration of unstable atomic nuclei by the emission of radiation.
37. "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to this article and North Dakota Century Code chapter 23.1-03.
38. "Registration" means the notification of the department of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.
39. "Regulations of the United States department of transportation" means the regulations in 49 CFR part 100-189.
40. "Rem" means the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 sievert (Sv)).
41. "Roentgen" (R) means the special unit of exposure. One roentgen equals two hundred fifty-eight millionths of a coulomb per kilogram of air. (See "exposure")
42. "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.
43. "SI" means the abbreviation for the international system of units.
44. "Sievert" means the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv= 100 rems).
45. "Source material" means: (a) uranium or thorium, or any combination thereof, in any physical or chemical form; or (b) ores that contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium, or any combination of uranium and thorium. Source material does not include special nuclear material.
46. "Source material milling" means any activity that results in the production of byproduct material as defined in subdivision b of subsection 17.
47. "Source of radiation" means any radioactive material, or any device or equipment emitting or capable of producing radiation.

48. "Special nuclear material" means:

- a. Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the United States nuclear regulatory commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determined to be special nuclear material, but does not include source material; or
- b. Any material artificially enriched by any of the foregoing but does not include source material.

49. "Test" means a method for determining the characteristics or condition of sources of radiation or components thereof. "Test" may also mean the process of verifying compliance with this article.

50. "These rules" means all parts of this article and any subsequent changes or additions thereto.

51. "Uranium fuel cycle" means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel to the extent that these activities directly support the production of electrical power for public use. Uranium fuel cycle does not include mining operations, operations at waste disposal sites, transportation of radioactive material in support of these operations, and the reuse of recovered nonuranium special nuclear and byproduct materials from the cycle.

52. "Waste handling licensees" means persons licensed to receive and store radioactive wastes prior to disposal and/or persons licensed to dispose of radioactive waste.

53. "Worker" means an individual engaged in work under a license or registration issued by the department and controlled by a licensee or registrant.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02, 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-05. Exemptions.

1. **General provision.** The department may, upon application therefore or upon its own initiative, grant such exemptions or exceptions from the requirements of this article as it determines are authorized by law and will not result in undue hazard to public health and safety or property.

2. **United States department of energy contractors and United States nuclear regulatory commission contractors.** Any United States department of energy contractor or subcontractor and any United States nuclear regulatory commission contractor or subcontractor of the following categories operating within this state is exempt from this article to the extent that such contractor or subcontractor under the

contractor's or subcontractor's contract receives, possesses, uses, transfers, or acquires sources of radiation:

- a. Prime contractors performing work for the United States department of energy at United States government-owned or government-controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation.
- b. Prime contractors of the United States department of energy performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof.
- c. Prime contractors of the United States department of energy using or operating nuclear reactors or other nuclear devices in a United States government-owned vehicle or vessel.
- d. Any other prime contractor or subcontractor of the United States department of energy or the nuclear regulatory commission when the state and the nuclear regulatory commission jointly determine (1) that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety and (2) that, the exemption of the prime contractor or subcontractor is authorized by law.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02, 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-07, 23.1-03-08; S.L. 2017, ch. 199, § 18

33.1-10-01-06. Records.

Each licensee and registrant shall maintain records showing the receipt, transfer, and disposal of all sources of radiation. Additional record requirements are specified elsewhere in this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-01-07. Inspections.

1. Each licensee and registrant shall afford the department at all reasonable times, opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.
2. Each licensee and registrant shall make available to the department for inspection, upon reasonable notice, records maintained pursuant to this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-08. Tests.

Each licensee and registrant shall perform upon instructions from the department or shall permit the department to perform such reasonable tests as the department deems appropriate or necessary including, but not limited to, tests of:

1. Sources of radiation.
2. Facilities where sources of radiation are used or stored.
3. Radiation detection and monitoring instruments.
4. Other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-01-09. Additional requirements.

The department may, by rule or order, impose upon any licensee or registrant such requirements in addition to those established in this article as it deems appropriate or necessary to minimize danger to public health and safety or property.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-08; S.L. 2017, ch. 199, § 18

33.1-10-01-10. Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of North Dakota Century Code chapter 23.1-03 or any rules or order issued thereunder. Any person who violates any provision of North Dakota Century Code chapter 23.1-03 or any rule or order issued thereunder, and, upon conviction thereof, may be punished as provided by law.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-12, 23.1-03-15; S.L. 2017, ch. 199, § 18

33.1-10-01-11. Impounding.

Sources of radiation shall be subject to impounding pursuant to North Dakota Century Code section 23.1-03-14.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-14; S.L. 2017, ch. 199, § 18

33.1-10-01-12. Prohibited uses.

The following sources of ionizing radiation are prohibited:

1. A hand-held fluoroscopic screen shall not be used with x-ray equipment unless it has been listed in the registry of sealed source and devices or accepted for certification by the United States food and drug administration, center for devices and radiological health.
2. Shoe-fitting fluoroscopic devices shall not be used.
3. Those sources of ionizing radiation when found to be detrimental to health and safety or in violation of this article.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-13; S.L. 2017, ch. 199, § 18

33.1-10-01-13. Communications.

All communications and reports concerning this article and applications filed thereunder shall be addressed to the department as follows:

Mailing and shipping address:

Department of Environmental Quality

Division of Air Quality

918 East Divide Avenue, Second Floor

Bismarck, ND 58501-1947

Telephone (701)328-5188

Facsimile (Fax) (701)328-5185

24-hour emergency in-state 800-472-2121; out-of-state (701)328-9921

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-07; S.L. 2017, ch. 199, § 18

33.1-10-01-14. Units of exposure, dose, and activity.

1. As used in these rules, the unit of exposure is the coulomb per kilogram (C/kg) of air. One roentgen is equal to two hundred fifty-eight millionths coulomb per kilogram of air.
2. As used in these rules, the units of dose are:
 - a. Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of one hundred erg per gram or one one-hundredths (1/100) joule per kilogram (0.01 Gy).
 - b. Gray (Gy) is the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram (100 rad).
 - c. Rem is the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 Sv).

d. Sievert is the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor (1 Sv = 100 rem).

3. As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in table I.

Table I
QUALITY FACTORS AND ABSORBED DOSE EQUIVALENTS

<u>TYPE OF RADIATION</u>	<u>Quality Factor (Q)</u>	<u>Absorbed Dose Equal to a Unit Dose Equivalent*</u>
<u>X, gamma, or beta radiation and high-speed electrons</u>	<u>1</u>	<u>1</u>
<u>Alpha particles, multiple-charged particles, fission fragments, and heavy particles of unknown charge</u>	<u>20</u>	<u>0.05</u>
<u>Neutrons of unknown energy</u>	<u>10</u>	<u>0.1</u>
<u>High-energy protons</u>	<u>10</u>	<u>0.1</u>

* Absorbed dose in rad equal to one rem or the absorbed dose in gray equal to one sievert.

4. If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in rem per hour or sievert per hour, as provided in subsection 3, one one-hundredth sievert [1 rem] of neutron radiation of unknown energies may, for purposes of these rules, be assumed to result from a total fluence of twenty-five million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate Q value from table II to convert a measured tissue dose in gray or rad to dose equivalent in rem or sievert.

Table II
MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE EQUIVALENT FOR
MONOENERGETIC NEUTRONS

	<u>Neutron Fluence</u> <u>per Unit Energy</u> <u>(MeV)</u>	<u>Quality Factor</u> ^a <u>(Q)</u>	<u>Fluence per Unit</u> <u>Dose Equivalent</u> ^b <u>(neutrons cm⁻²</u> <u>rem⁻¹)</u>	<u>Dose Equivalent</u> ^b <u>(neutrons cm⁻²</u> <u>Sv⁻¹)</u>
<u>(thermal)</u>	<u>2.5E-8</u>	<u>2</u>	<u>980E+6</u>	<u>980E+8</u>
	<u>1E-7</u>	<u>2</u>	<u>980E+6</u>	<u>980E+8</u>
	<u>1E-6</u>	<u>2</u>	<u>810E+6</u>	<u>810E+8</u>
	<u>1E-5</u>	<u>2</u>	<u>810E+6</u>	<u>810E+8</u>
	<u>1E-4</u>	<u>2</u>	<u>840E+6</u>	<u>840E+8</u>
	<u>1E-3</u>	<u>2</u>	<u>980E+6</u>	<u>980E+8</u>
	<u>1E-2</u>	<u>2.5</u>	<u>1010E+6</u>	<u>1010E+8</u>
	<u>1E-1</u>	<u>7.5</u>	<u>170E+6</u>	<u>170E+8</u>
	<u>5E-1</u>	<u>11</u>	<u>39E+6</u>	<u>39E+8</u>
	<u>1</u>	<u>11</u>	<u>27E+6</u>	<u>27E+8</u>
	<u>2.5</u>	<u>9</u>	<u>29E+6</u>	<u>29E+8</u>
	<u>5</u>	<u>8</u>	<u>23E+6</u>	<u>23E+8</u>
	<u>7</u>	<u>7</u>	<u>24E+6</u>	<u>24E+8</u>
	<u>10</u>	<u>6.5</u>	<u>24E+6</u>	<u>24E+8</u>
	<u>14</u>	<u>7.5</u>	<u>17E+6</u>	<u>17E+8</u>
	<u>20</u>	<u>8</u>	<u>16E+6</u>	<u>16E+8</u>
	<u>40</u>	<u>7</u>	<u>14E+6</u>	<u>14E+8</u>
	<u>60</u>	<u>5.5</u>	<u>16E+6</u>	<u>16E+8</u>
	<u>1E+2</u>	<u>4</u>	<u>20E+6</u>	<u>20E+8</u>
	<u>2E+2</u>	<u>3.5</u>	<u>19E+6</u>	<u>19E+8</u>
	<u>3E+2</u>	<u>3.5</u>	<u>16E+6</u>	<u>16E+8</u>
	<u>4E+2</u>	<u>3.5</u>	<u>14E+6</u>	<u>14E+8</u>

^a Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

^b Monoenergetic neutrons incident normally on a 30-centimeter diameter cylinder tissue-equivalent phantom.

5. For purposes of these rules, activity is expressed in the special unit of curie (Ci) or in the international system (SI) unit of becquerel (Bq), or their multiples, or disintegrations or transformations per unit of time.

a. One curie (Ci) = 3.7E+10 disintegrations or transformations per second (dps or tps) = 3.7E+10 becquerel (Bq) = 2.22E+12 disintegrations or transformations per minute (dpm or tpm).

b. One becquerel (Bq) = one disintegration or transformation per second (dps or tps).

6. SI numerical prefix conversions. See table III for a listing of numerical prefixes to convert SI units or special units by appropriate multiples:

Table III
SI Numerical Prefix Conversion Table

<u>Multiplication Factors</u>	<u>Prefix</u>	<u>Symbol</u>
<u>1 000 000 000 000 000 000 = 10¹⁸</u>	<u>exa</u>	<u>E</u>
<u>1 000 000 000 000 000 = 10¹⁵</u>	<u>peta</u>	<u>P</u>
<u>1 000 000 000 000 = 10¹²</u>	<u>tera</u>	<u>T</u>
<u>1 000 000 000 = 10⁹</u>	<u>giga</u>	<u>G</u>
<u>1 000 000 = 10⁶</u>	<u>mega</u>	<u>M</u>
<u>1 000 = 10³</u>	<u>kilo</u>	<u>k</u>
<u>100 = 10²</u>	<u>hecto</u>	<u>h</u>
<u>10 = 10¹</u>	<u>deka</u>	<u>da</u>
<u>0.1 = 10⁻¹</u>	<u>deci</u>	<u>d</u>
<u>0.01 = 10⁻²</u>	<u>centi</u>	<u>c</u>
<u>0.001 = 10⁻³</u>	<u>milli</u>	<u>m</u>
<u>0.000 001 = 10⁻⁶</u>	<u>micro</u>	<u>u</u>
<u>0.000 000 001 = 10⁻⁹</u>	<u>nana</u>	<u>n</u>
<u>0.000 000 000 001 = 10⁻¹²</u>	<u>pico</u>	<u>p</u>
<u>0.000 000 000 000 001 = 10⁻¹⁵</u>	<u>femto</u>	<u>f</u>
<u>0.000 000 000 000 000 001 = 10⁻¹⁸</u>	<u>atto</u>	<u>a</u>

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-02 **REGISTRATION OF RADIATION MACHINE FACILITIES AND SERVICES**

Section

33.1-10-02-01 Purpose and Scope

33.1-10-02-01.1 Definitions

33.1-10-02-02 Exemptions

33.1-10-02-03 Application for Registration of Radiation Machine Facilities

33.1-10-02-04 Application for Registration of Servicing and Services

- 33.1-10-02-05 Issuance of Notice of Registration
- 33.1-10-02-06 Expiration of Notice of Registration
- 33.1-10-02-07 Renewal of Notice of Registration
- 33.1-10-02-08 Report of Changes
- 33.1-10-02-09 Approval Not Implied
- 33.1-10-02-10 Assembler and Transferor Obligation
- 33.1-10-02-11 Out-of-State Radiation Machines

33.1-10-02-01. Purpose and scope.

1. This chapter provides for the registration of radiation machine facilities and for the registration of persons providing radiation machine installation, servicing, or services.
2. In addition to the requirements of this chapter, all registrants are subject to the applicable provisions of other chapters of this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-01.1. Definitions.

As used in this chapter, "facility" means the location at which one or more devices or sources are installed or located, or both, within one building, vehicle, or under one roof and are under the same administrative control.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02, 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-02. Exemptions.

1. Electronic equipment that produces radiation incidental to its operation for other purposes is exempt from the registration and notification requirements of this chapter, providing that the dose equivalent rate averaged over an area of ten square centimeters does not exceed five microsievert [0.5 millirem] per hour at five centimeters from any accessible surface of such equipment. The production, testing, or factory servicing of such equipment shall not be exempt.
2. Radiation machines while in transit or storage incident thereto are exempt from the requirements of this chapter.
3. Domestic television receivers are exempt from the requirements of this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-03. Application for registration of radiation machine facilities.

Each person having a radiation machine facility shall:

1. Apply for registration of such facility with the department prior to the operation of a radiation machine facility. Application for registration shall be completed on forms furnished by the department and shall contain all the information required by the form and accompanying instructions.
2. Designate on the application form an individual to be responsible for radiation protection.
3. Each registrant shall prohibit any person from furnishing radiation machine servicing or services as described in subsection 4 of section 33.1-10-02-04, to the registrant's radiation machine facility until such person provides evidence that the service person has been registered with the department as a provider of services in accordance with section 33.1-10-02-04.
4. Each application for registration shall be accompanied by the fee prescribed in chapter 33.1-10-11.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-02-04. Application for registration of servicing and services.

1. Each person who is engaged in the business of installing or offering to install radiation machines or is engaged in the business of furnishing or offering to furnish radiation machine servicing or services in this state shall apply for registration of such services with the department prior to furnishing or offering to furnish any such services.
2. Application for registration shall be completed on forms furnished by the department and shall contain all information required by the department as indicated on the forms and accompanying instructions.
3. Each person applying for registration under this chapter shall specify:
 - a. That the person has read and understands the requirements of this article.
 - b. The services for which the person is applying for registration.
 - c. The training and experience that qualify the person to discharge the services for which the person is applying for registration.
 - d. The type of measurement instrument to be used, frequency of calibration, and source of calibration.
 - e. The type of personnel dosimeters supplied, frequency of reading, and replacement or exchange schedule.
4. For the purpose of this section, services may include, but shall not be limited to:
 - a. Installation or servicing, or both, of radiation machines and associated radiation machine components.

b. Calibration of radiation machines or radiation measurement instruments or devices.

c. Radiation protection or health physics consultations or surveys.

d. Personnel dosimetry services.

5. No individual may perform services which are not specifically stated for that individual on the notice of registration issued by the department.

6. Each application for registration shall be accompanied by the fee prescribed in chapter 33.1-10-11. The fee will cover the period from June first, through May thirty-first of each year, regardless of the application date.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-02-05. Issuance of notice of registration.

1. Upon a determination that an applicant meets the requirements of the article, the department shall issue a notice of registration.

2. The department may incorporate in the notice of registration at the time of issuance or thereafter by appropriate rule, or order, such additional requirements and conditions with respect to the registrant's receipt, possession, use, and transfer of radiation machines as it deems appropriate or necessary.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-06. Expiration of notice of registration.

Except as provided by subsection 2 of section 33.1-10-02-07, each notice of registration shall expire at the end of the first day in the month and year stated therein.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-07. Renewal of notice of registration.

1. Application for renewal of registration shall be filed in accordance with subsection 1 of section 33.1-10-02-03 or subsection 2 of section 33.1-10-02-04. Each application for registration shall be accompanied by the fee prescribed in chapter 33.1-10-11.

2. In any case in which a registrant not less than thirty days prior to the expiration of this existing notice of registration has filed an application in proper form for renewal, such existing notice of registration shall not expire until the application status has been finally determined by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-08. Report of changes.

The registrant shall notify the department, in writing, before making any change which would render the information contained in the application for registration or the notice of registration no longer accurate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-09. Approval not implied.

No person, in any advertisement, shall refer to the fact that the person or the person's facility is registered with the department pursuant to the provisions of subsection 1 of section 33.1-10-02-03 or subsection 2 of section 33.1-10-02-04 and no person shall state or imply that any activity under such registration has been approved by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-10. Assembler and transferor obligation.

1. Any person who sells, leases, transfers, lends, disposes, assembles, or installs radiation machines in this state shall notify the department within fifteen days of:

- a. The name and address of persons who have received these machines.
- b. The manufacturer, model, and serial number of each radiation machine transferred.
- c. The date of transfer of each radiation machine.

2. No person shall make, sell, lease, transfer, lend, assemble, or install radiation machines or the supplies used in connection with such machines unless such supplies and equipment, when properly placed in operation and used, shall meet the requirements of this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-02-11. Out-of-state radiation machines.

1. Whenever any radiation machine is to be brought into the state, for any temporary use, the person proposing to bring such machine into the state shall give written notice to the department at least three days before such machine is to be used in the state. The notice shall include:

- a. The type of radiation machine.
 - b. The nature, duration, and scope of use.
 - c. The exact locations where the radiation machine is to be used.
 - d. States in which this machine is registered.
 - e. The names and addresses where the machine users can be reached while in the state.
 - f. Payment of the annual reciprocity fee prescribed in chapter 33.1-10-11.
2. If, for a specific case, the three-day notification period would impose an undue hardship on the person, upon application to the department, permission to proceed sooner may be granted.
 3. The person referred to in subsection 1 shall:
 - a. Comply with this article.
 - b. Supply the department with such other information as the department may request.
 - c. Not operate within the state on a temporary basis in excess of one hundred eighty calendar days per year.
 - d. Reapply for reciprocity privileges annually.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-03 **[RESERVED]**

CHAPTER 33.1-10-03.1 **RULES OF GENERAL APPLICABILITY TO DOMESTIC** **LICENSING OF BYPRODUCT MATERIAL**

Section

33.1-10-03.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations
Part 30

33.1-10-03.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 30.

10 Code of Federal Regulations 30.1, 30.2, 30.3, 30.4, 30.7, 30.9, 30.10, 30.11, 30.12, 30.13, 30.14, 30.15, 30.18, 30.19, 30.20, 30.21, 30.22, 30.31, 30.32, 30.33, 30.34, 30.35, 30.36, 30.37, 30.38, 30.39, 30.41, 30.50, 30.51, 30.52, 30.53, 30.61, 30.62, 30.70, 30.71, and 30.72 and appendix A through appendix E to part 30 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 30.21(c), 30.3(b)(1), 30.3(b)(2), 30.3(b)(3), 30.34(d), 30.34(e)(1), 30.34(e)(3), 30.41(b)(6), paragraph (2) of the definition of "commencement of construction", and paragraph (9)(ii) of the definition of "construction".
2. Requirements in 10 Code of Federal Regulations part 30 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", "NRC regional office", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations part 30, substitute the words "department of environmental quality" except when used in 10 Code of Federal Regulations 30.12, 30.21(c), 30.34(h)(1), and 30.50(c)(1).
4. 10 Code of Federal Regulations 30.7 employee protection also applies to violations of North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
6. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations part 30.
7. North Dakota state form number 8414, "notice to employees", must be posted instead of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations part 30.
8. The department of environmental quality radioactive material license replaces NRC form 374, "byproduct material license", as specified in 10 Code of Federal Regulations part 30.
9. North Dakota state form number 18941, "certificate: disposition of radioactive material", must be used instead of NRC form 314 as specified in 10 Code of Federal Regulations part 30.
10. For references to 10 Code of Federal Regulations part 170, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-04

[RESERVED]

CHAPTER 33.1-10-04.1

[RESERVED]

CHAPTER 33.1-10-04.2

STANDARDS FOR PROTECTION AGAINST RADIATION

Section

33.1-10-04.2-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations

Part 20

33.1-10-04.2-02 Individuals Working With Medical Fluoroscopic Equipment

33.1-10-04.2-03 Location of Individual Monitoring Devices

33.1-10-04.2-04 Effective Dose Equivalent Determination During Medical Fluoroscopy

33.1-10-04.2-05 Radiation Machine Security and Prevention of Unauthorized Use

33.1-10-04.2-06 Radiation Machine Labels

33.1-10-04.2-07 Additional Requirements - Vacating Premises

33.1-10-04.2-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 20.

10 Code of Federal Regulations 20.1001, 20.1002, 20.1003, 20.1004, 20.1005, 20.1008, 20.1101, 20.1201, 20.1202, 20.1203, 20.1204, 20.1206, 20.1207, 20.1208, 20.1301, 20.1302, 20.1401, 20.1402, 20.1403, 20.1404, 20.1405, 20.1406, 20.1501, 20.1502, 20.1601, 20.1602, 20.1701, 20.1702, 20.1703, 20.1704, 20.1705, 20.1801, 20.1802, 20.1901, 20.1902, 20.1903, 20.1904, 20.1905, 20.1906, 20.2001, 20.2002, 20.2003, 20.2004, 20.2005, 20.2006, 20.2007, 20.2008, 20.2101, 20.2102, 20.2103, 20.2104, 20.2105, 20.2106, 20.2107, 20.2108, 20.2110, 20.2201, 20.2202, 20.2203, 20.2204, 20.2205, 20.2206, 20.2207, 20.2301, and 20.2302, appendix A through C to part 20, appendix E to part 20, and appendix G to part 20 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations (CFR) 20.1406(b), 20.1905(g), 20.2203(c), and 20.2206(a)(1), (a)(3), (a)(4), and (a)(5).
2. All of the requirements in chapter 33.1-10-04.2 apply to both licensees and registrants. A reference in 10 CFR part 20 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", a reference to "licensed material(s)" includes "registered source of radiation", and a reference to "licensed radioactive material" includes "registered source of radiation". "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to article 33.1-10 and North Dakota Century Code chapter 23.1-03. "Registration" means the notification of the department of environmental quality of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.
3. Where the words "NRC", "commission", "administrator of the appropriate NRC regional office", "administrator of the nearest commission regional office", or "NRC regional office" appear in 10 CFR part 20, substitute the words "department of environmental quality".
4. Requirements in 10 CFR part 20 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
5. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
6. North Dakota state form number 19443, "occupational radiation exposure history", must be used instead of NRC form 4 as specified in 10 CFR part 20.

7. North Dakota state form number 8416, "current occupational radiation exposure", must be used instead of NRC form 5 as specified in 10 CFR part 20.
8. NRC form 748 shall not be used as described in 10 CFR part 20.
9. The words "in the Federal Register and" shall be omitted from 10 CFR 20.1405(b).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-02. Individuals working with medical fluoroscopic equipment.

Each registrant shall provide dose monitoring and shall monitor occupational exposure to ensure compliance for:

1. Occupational dose limits to adults pursuant to 10 CFR 20.1201.
2. Occupational dose limits to minors pursuant to 10 CFR 20.1207.
3. The dose equivalent to an embryo/fetus pursuant to 10 CFR 20.1208.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-03. Location of individual monitoring devices.

Each licensee or registrant shall ensure that individuals who are required to monitor occupational doses in accordance with 10 CFR 20.1502 wear individual monitoring devices as follows:

1. An individual monitoring device used for monitoring the dose to the whole body shall be worn at the unshielded location of the whole body likely to receive the highest exposure. When a protective apron is worn, the location of the individual monitoring device is typically at the neck (collar);
2. An individual monitoring device used for monitoring the dose to an embryo or fetus of a declared pregnant woman, pursuant to 10 CFR 20.1208, shall be located at the waist under any protective apron being worn by the woman;
3. An individual monitoring device used for monitoring the lens dose equivalent, to demonstrate compliance with subparagraph a of 10 CFR 20.1201, shall be located at the neck (collar), outside any protective apron being worn by the monitored individual, or at an unshielded location closer to the eye; and
4. An individual monitoring device used for monitoring the dose to the extremities, to demonstrate compliance with subparagraph a of 10 CFR 20.1201, shall be worn on the extremity likely to receive the highest exposure. Each individual monitoring device shall be oriented to measure the highest dose to the extremity being monitored.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-04. Effective dose equivalent determination during medical fluoroscopy.

When a protective apron is worn while working with medical fluoroscopic equipment and monitoring is conducted as specified in subdivision d, the effective dose equivalent for external radiation shall be determined as follows:

1. When only one individual monitoring device is used and it is located at the neck (collar) outside the protective apron, the reported deep dose equivalent shall be the effective dose equivalent for external radiation.
2. When only one individual monitoring device is used and it is located at the neck (collar) outside the protective apron, and the reported dose exceeds twenty-five percent of the limit specified in 10 CFR 20.1201, the reported deep dose equivalent value multiplied by three-tenths shall be the effective dose equivalent for external radiation.
3. When two individual monitoring devices are worn, one under the protective apron at the waist and the other outside the protective apron at the neck (collar), the effective dose equivalent for external radiation shall be assigned the value of the sum of the deep dose equivalent reported for the individual monitoring device located at the waist under the protective apron multiplied by one and five-tenths and the deep dose equivalent reported for the individual monitoring device located at the neck (collar) outside the protective apron multiplied by four-hundredths.
4. Subdivisions b and c only apply when all of the following conditions are met:
 - a. The individual monitoring devices have not been exposed to radiation from radioactive material.
 - b. Lead glasses, a thyroid shield, and a wraparound protective apron have been worn whenever using the medical fluoroscopic equipment.
 - c. The area around the medical fluoroscopic equipment has been equipped with lead shielding or transparent protective barriers for control of scattered radiation.
 - d. The medical fluoroscopic procedures have been performed in a way that minimizes beam on time, such as utilizing last image hold.
 - e. Users of the medical fluoroscopic equipment must have had formal training in radiation safety and operation of medical fluoroscopic equipment.
 - f. Performance of the medical fluoroscopic equipment must be monitored and maintained via a quality assurance program.
 - g. Patient and staff radiation exposures from medical fluoroscopic equipment must be monitored and actions taken to correct problems.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-05. Radiation machine security and prevention of unauthorized use.

1. The registrant shall secure registered radiation machines from unauthorized removal.
2. The registrant shall use devices or administrative procedures to prevent unauthorized use of registered radiation machines.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-06. Radiation machine labels.

Each registrant shall ensure that each radiation machine is labeled in a conspicuous manner which cautions individuals that radiation is produced when it is energized.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-04.2-07. Additional requirements - Vacating premises.

Each specific licensee or registrant shall, no less than thirty days before vacating or relinquishing possession or control of premises which may have been contaminated with radioactive material as a result of the licensee's or registrant's activities, notify the department in writing of intent to vacate. When deemed necessary by the department, the licensee shall decontaminate the premises in accordance with the following or in such other manner as the department may specify.

1. **Premises.** Each licensee before vacating any premise, or transferring the premise, shall permanently decontaminate such premises to meet the criteria for decommissioning in 10 CFR part 20, subpart E as adopted by this chapter. A survey shall be made after such decontamination and the department and the landlord or subsequent tenant or transferee shall be provided with a copy of such survey no less than thirty days before vacating or relinquishing possession or control of premises. No such premise may be vacated, sold, or transferred until the decontamination survey has been verified and accepted by the department. For naturally occurring radioactive materials (NORM) and technologically enhanced naturally occurring radioactive materials (TENORM), decontamination shall meet the standards found in table 4.2-07.1.
2. **Equipment.** No machinery, instruments, laboratory equipment, or any other property used in contact with, or close proximity to, NORM or TENORM, or both, at a licensed premise may be assigned, sold, leased, or transferred to an unlicensed person unless such property has been permanently decontaminated below or equal to the standards specified in 10 CFR part 20, subpart E as adopted by this chapter. A survey shall be made after such decontamination and the department and subsequent transferee or owner shall be provided with a copy of such survey. No such equipment may be

assigned, sold, leased, or transferred until such documentation survey has been verified and accepted by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-03-05; S.L. 2017, ch. 199, § 18

Table 4.2-07.1

Standards for Unrestricted Release for NORM and TENORM

(a) Surface contamination limits

(1) Alpha emitters

(i) Removable:

0.55Bq = 15.0 pCi = 33 dpm
100cm² 100 cm² 100 cm² average over
any one surface

1.665 Bq = 45.0 pCi = 100 dpm
100 cm² 100 cm² 100 cm² maximum

(ii) Total (fixed):

166.5 Bq = 150.0 pCi = 1,000 dpm
100 cm² 100 cm² 100 cm² average over
any one surface

832.5 Bq = 2,250.0 pCi = 5,000 dpm
100 cm² 100 cm² 100 cm² maximum

2.5 μSv = (0.25 mrem) = maximum at 1 cm from surface
hr hr

(2) Beta-gamma emitters

(i) Removable:

3.7 Bq = 100.0 pCi = average over any one surface
100 cm² 100 cm²

18.5 Bq = 500.0 pCi = maximum
100 cm² 100 cm²

(ii) Total (fixed)

2.5 μSv = (0.25 mrem) = maximum at 1 cm from surface
hr hr

(b) Concentration in air and water: Appendix B, Table 2 of chapter 33.1-10-04.2.

(c) Concentrations in soil and other materials except water:

(1) Radium in soil: Concentration of radionuclides above background concentrations for total radium, averaged over areas of one hundred square meters, shall not exceed:

(i) Five (5.0) picocuries per gram of soil, averaged over layers of fifteen centimeters thickness more than fifteen centimeters below the surface.

(ii) Five (5.0) picocuries per gram of dry soil, averaged over layers of fifteen centimeters thickness more than fifteen centimeters below the surface.

(2) Radium in other materials: Concentration of radionuclides above background concentrations for total radium shall not exceed five (5.0) picocuries per gram.

(d) The level of gamma radiation measured at a distance of hundred centimeters from the surface shall not exceed background.

CHAPTER 33.1-10-05

[RESERVED]

CHAPTER 33.1-10-05.1

RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

Section

33.1-10-05.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 34

33.1-10-05.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 34.

10 Code of Federal Regulations 34.1, 34.3, 34.11, 34.13, 34.20, 34.21, 34.23, 34.25, 34.27, 34.29, 34.31, 34.33, 34.35, 34.41, 34.42, 34.43, 34.45, 34.46, 34.47, 34.49, 34.51, 34.53, 34.61, 34.63, 34.65, 34.67, 34.69, 34.71, 34.73, 34.75, 34.79, 34.81, 34.83, 34.85, 34.87, 34.89, 34.101, and 34.111 and appendix A to part 34 are adopted by reference as they exist on October 1, 2015, with the following exceptions:

1. All of the requirements in chapter 33.1-10-05.1 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations part 34 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", and a reference to "licensed material" includes "registered source of radiation". "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to article 33.1-10 and North Dakota Century Code chapter 23.1-03. "Registration" means the notification of the department of environmental quality of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.
2. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", "NRC regional administrator", "NRC regional office", "administrator of the appropriate nuclear regulatory commission's regional office", or "NRC's office of nuclear material safety and safeguards, division of industrial and medical nuclear safety" appear in 10 Code of Federal Regulations part 34, substitute the words "department of environmental quality".
3. Requirements in 10 Code of Federal Regulations part 34 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
4. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations part 34.
5. For references to 10 Code of Federal Regulations parts 170 and 171, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-06 **X-RAYS IN THE HEALING ARTS**

Section

33.1-10-06-01 Scope

33.1-10-06-02 Definitions

33.1-10-06-03 General Requirements

33.1-10-06-04 General Requirements for All Diagnostic X-Ray Systems

33.1-10-06-05 Fluoroscopic X-Ray Systems

33.1-10-06-06 Radiographic Systems Other Than Fluoroscopic, Dental Intraoral, Bone Densitometry or Computed Tomography X-Ray Systems

33.1-10-06-07 Intraoral Dental Radiographic Systems

33.1-10-06-08 [Reserved]

33.1-10-06-09 [Reserved]

33.1-10-06-10 [Reserved]

33.1-10-06-11 Computed Tomography X-Ray Systems

33.1-10-06-12 Bone Densitometry

33.1-10-06-01. Scope.

This chapter establishes requirements, for which a registrant is responsible, for use of x-ray equipment and imaging systems by or under the supervision of an individual authorized by and licensed in accordance with state statutes to engage in the healing arts or veterinary medicine. The requirements of this chapter are in addition to, and not in substitution for, other applicable requirements of this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-02. Definitions.

As used in this chapter, the following definitions apply:

1. "Absorbed dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the gray (Gy) and the rad.
2. "Accessible surface" means surface of equipment or of an equipment part that can be touched by persons without the use of a tool.
3. "Added filtration" means any filtration which is in addition to the inherent filtration.
4. "Air kerma" means kerma in air (see "kerma").
5. "Air kerma rate" means the air kerma per unit of time.
6. "AKR" means air kerma rate.

7. "Allied health" means occupations of medical personnel who are not physicians and are qualified by special training to undergo cross-training into x-ray as a limited x-ray machine operator. Refer to appendix G for qualifying professions.
8. "Aluminum equivalent" means the thickness of type 1100 aluminum alloy affording the same attenuation, under specified conditions, as the material in question. (The nominal chemical composition of type 1100 aluminum alloy is ninety-nine percent minimum aluminum, twelve-hundredths percent copper.)
9. "As low as reasonably achievable" (ALARA) means making every reasonable effort to maintain the exposures to radiation as far below dose limits as is practicable.
10. "Assembler" means any person engaged in the business of assembling, replacing, or installing one or more components into an x-ray system or subsystem. The term includes the owner of an x-ray system or the employee or agent who assembles components into an x-ray system that is subsequently used to provide professional or commercial services.
11. "Attenuation block" means a block or stack, having dimensions twenty centimeters by twenty centimeters by three and eight-tenths centimeters, of type 1100 aluminum alloy or other materials having equivalent attenuation.
12. "Automatic exposure control" means a device which automatically controls one or more technique factors in order to obtain at a preselected location or locations a required quantity of radiation (includes devices such as phototimers and ion chambers).
13. "Barrier" (see "protective barrier").
14. "Beam axis" means the axis of rotation of the beam-limiting device from the source through the centers of the x-ray fields.
15. "Beam-limiting device" means a device which provides a means to restrict the dimensions of the useful beam.
16. "Biennium" means a two-year cycle.
17. "Board certified" means an individual who has completed an accredited school of medical radiography or chiropractic radiography and has passed a national registry examination.
18. "Board eligible" means an individual who has obtained eligibility to take a national registry examination in radiologic technology or chiropractic radiologic technology.
19. "Bone densitometry system" means a medical device which uses electronically produced ionizing radiation to determine the density of bone structures of human patients.
20. "Calibration" means the determination of:
 - a. The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or

b. The strength of a source of radiation relative to a standard.

21. "C-arm x-ray system" means an x-ray system in which the image receptor and x-ray tube housing assembly are connected by a common mechanical support system in order to maintain a desired spatial relationship. This system is designed to allow a change in the projection of the beam through the patient without a change in the position of the patient.
22. "Cephalometric device" means a device intended for the radiographic visualization and measurement of the dimensions of the human head.
23. "Certified components" means components of x-ray systems which are subject to regulations promulgated under the Radiation Control for Health and Safety Act of 1968 [Pub. L. 90-602].
24. "Certified system" means any x-ray system which has one or more certified component or components.
25. "CEU" (see "continuing education unit").
26. "CFR" means Code of Federal Regulations.
27. "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical, or physical process.
28. "Coefficient of variation" or "C" means the ratio of the standard deviation to the mean value of a set of observations. It is estimated using the following equation:

$$C = \frac{s}{\bar{X}} = \frac{1}{\bar{X}} \left[\sum_{i=1}^n \frac{(X_i - \bar{X})^2}{n-1} \right]^{1/2}$$

where:

s ≡ Estimated standard deviation of the population.

-

\bar{X} ≡ Mean value of observations in sample.

X_i ≡ i^{th} observation in sample.

n ≡ Number of observations in sample.

29. "Computed tomography" means the production of a tomogram by the acquisition and computer processing of x-ray transmission data.
30. "Contact therapy system" means an x-ray system used for therapy with the x-ray tube port placed in contact with or within five centimeters of the surface being treated.
31. "Continuing education" means a planned, organized, and administered learning activity that enhances the knowledge and underlying skills of an x-ray operator.

32. "Continuing education unit" means a unit of measure for continuing education. One continuing education unit is equal to one contact hour.
33. "Control panel" means that part of the x-ray control upon which are mounted the switches, knobs, pushbuttons, and other hardware necessary for manually setting the technique factors.
34. "Cooling curve" means the graphical relationship between heat units stored and cooling time.
35. "CT" (see "computed tomography").
36. "Dead-man switch" means a switch so constructed that a circuit closing contact can be maintained only by continuous pressure on the switch by the operator.
37. "Department" means the department of environmental quality.
38. "Detector" (see "radiation detector").
39. "Diagnostic source assembly" means the tube housing assembly with a beam-limiting device attached.
40. "Diagnostic x-ray imaging system" means an assemblage of components for the generation, emission, and reception of x-rays and the transformation, storage, and visual display of the resultant x-ray image.
41. "Diagnostic x-ray system" means an x-ray system designed for irradiation of any part of the human or animal body for the purpose of diagnosis or visualization.
42. "Direct scattered radiation" means that scattered radiation which has been deviated in direction only by materials irradiated by the useful beam (see "scattered radiation").
43. "Direct supervision" requires direct observation and observer must be in the room during the time the x-ray image is obtained.
44. "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, "radiation dose" is an equivalent term.
45. "Dose limits" means the permissible upper bounds of radiation of doses established in accordance with these rules.
46. "Entrance exposure rate" means the radiation exposure free in air per unit time at the point where the center of the useful beam enters the patient.
47. "Equipment" (see "x-ray equipment").
48. "Exposure" means being exposed to ionizing radiation.
49. "Field emission equipment" means equipment which uses an x-ray tube in which electron emission from the cathode is due solely to the action of an electric field.

50. "Filter" means material placed in the useful beam to absorb preferentially selected radiations.
51. "Fluoroscopic imaging assembly" means a subsystem in which x-ray photons produce a visible image. It includes the image receptor or receptors such as the image intensifier and spot-film device, electrical interlocks, if any, and structural material providing linkage between the image receptor and diagnostic source assembly.
52. "Focal spot" means the location projected on the anode of the x-ray tube bombarded by the electrons accelerated from the cathode and from which the useful beam originates.
53. "General diagnostic operator" means an individual who is American registry of radiologic technologists (ARRT) or American chiropractic registry of radiologic technologists (ACRRT) board-certified, is or has been board-eligible, or has the equivalent educational and clinical training and received specific authorization from the department.
54. "General purpose radiographic x-ray system" means any radiographic x-ray system which, by design, is not limited to radiographic examination of specific anatomical regions.
55. "Gonad shield" means a protective barrier for the testes or ovaries.
56. "Gray" (Gy) means the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram or 100 rad.
57. "Half-value layer" means the thickness of specified material which attenuates x-radiation or gamma radiation to an extent such that the air kerma rate, exposure rate or absorbed dose rate is reduced to one-half of the value measured without the material at the same point.
58. "Hand-held dental x-ray equipment" (see "x-ray equipment").
59. "Healing arts" means diagnostic or healing treatment of human and animal maladies, including the following which are duly licensed by the state of North Dakota for the lawful practice of medicine and its associated specialties, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.
60. "Healing arts screening" means the testing of human beings using x-ray machines for the detection or evaluation of health indications when such tests are not specifically and individually ordered by a licensed practitioner of the healing arts legally authorized to prescribe such x-ray tests for the purpose of diagnosis or treatment.
61. "Heat unit" means a unit of energy equal to the product of the peak kilovoltage, milliamperes, and seconds, i.e., kVp x mA x seconds.
62. "HVL" (see "half-value layer").
63. "Image intensifier" means a device, installed in its housing, which instantaneously converts an x-ray pattern into a corresponding light image of higher energy density.

64. "Image receptor" means any device, such as a fluorescent screen or radiographic film, which transforms incident x-ray photons either into a visible image or into another form which can be made into a visible image by further transformations.
65. "Image receptor support" means, for mammographic systems, that part of the system designed to support the image receptor during a mammographic examination.
66. "Inherent filtration" means the filtration of the useful beam provided by the permanently installed components of the tube housing assembly.
67. "Inspection" means an official examination or observation, including tests, surveys, and monitoring to determine compliance with rules, regulations, requirements, and conditions of the department.
68. "Irradiation" means the exposure of matter to ionizing radiation.
69. "Kerma" means the sum of the initial kinetic energies of all the charged ionizing particles liberated by uncharged ionizing particles per unit mass of a specified material. The SI unit of measure is joule per kilogram, or gray (Gy).
70. "Kilovolts peak" (see "peak tube potential").
71. "kV" means kilovolts.
72. "kVp" (see "peak tube potential").
73. "kWs" means kilowatt second. It is equivalent to 10^3 kV · mA · s, i.e.,
$$\text{kWs} = (X)\text{kV} \times (Y)\text{mA} \times (Z)\text{s} \times 10^{-3} \equiv \frac{XYZ}{10^3}$$
74. "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.
75. "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:
- a. The useful beam; and
 - b. Radiation produced when the exposure switch or timer is not activated.
76. "Leakage technique factors" means the technique factors associated with the diagnostic or therapeutic assembly which are used in measuring leakage radiation. They are defined as follows:
- a. For diagnostic source assemblies intended for capacitor energy storage equipment, the maximum-rated peak tube potential and the maximum-rated number of exposures in an hour for operation at the maximum-rated peak tube potential with the quantity of charge per exposure being ten millicoulombs, i.e., ten milliampere seconds, or the minimum obtainable from the unit, whichever is larger.

- b. For diagnostic source assemblies intended for field emission equipment rated for pulsed operation, the maximum-rated peak tube potential and the maximum-rated number of x-ray pulses in an hour for operation at the maximum-rated peak tube potential.
 - c. For all other diagnostic or therapeutic source assemblies, the maximum-rated peak tube potential and the maximum-rated continuous tube current for the maximum-rated peak tube potential.
77. "Light field" means the area illuminated by light, simulating the radiation field.
 78. "Limited x-ray machine operator" means any individual who has completed the necessary didactic and clinical training required to perform limited scope x-ray procedures.
 79. "Linear attenuation coefficient" or "u" means the quotient of dN/N divided by dl when dN/N is the fraction of uncharged ionizing radiation that experience interactions in traversing a distance dl in a specified material.
 80. "mA" means milliamperere.
 81. "mAs" means milliamperere second.
 82. "Milliamperere" as used in this chapter applies to x-ray tube current.
 83. "Milliamperere second" as used in this chapter is the product of the tube current and x-ray exposure time measured in seconds.
 84. "Mobile x-ray equipment" (see "x-ray equipment").
 85. "Monitoring" means the measurement of radiation and the use of the measured results to evaluate potential exposures and doses.
 86. "Patient" means an individual or animal subjected to radiation for the purposes of diagnosis or treatment.
 87. "PBL" has the same meaning as "positive beam limitation".
 88. "Peak tube potential" means the maximum value of the potential difference across the x-ray tube during an exposure.
 89. "Phantom" means a volume of material behaving in a manner similar to tissue with respect to the absorption and scattering of the ionizing radiation in question.
 90. "Phototimer" means a method for controlling radiation exposures to image receptors by the amount of radiation which reaches a radiation monitoring device. The radiation monitoring device is part of an electronic circuit which controls the duration of time the tube is activated (see "automatic exposure control").

91. "Physician" means a medical doctor, doctor of osteopathy, doctor of podiatry, or chiropractor licensed by a state or territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico.
92. "Portable x-ray equipment" (see "x-ray equipment").
93. "Position indicating device" means a device on dental x-ray equipment used to indicate the beam position and to establish a definite source-surface (skin) distance. It may or may not incorporate or serve as a beam-limiting device.
94. "Positive beam limitation" means the automatic or semiautomatic adjustment of an x-ray beam to the size of the selected image receptor, whereby exposures cannot be made without such adjustment.
95. "Primary dose monitoring system" means a system which will monitor the useful beam during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been delivered.
96. "Primary protective barrier" (see "protective barrier").
97. "Protective apron" means an apron made of radiation attenuating materials used to reduce radiation exposure.
98. "Protective barrier" means a barrier of radiation absorbing material or materials used to reduce radiation exposure. The types of protective barriers are as follows:
- a. "Primary protective barrier" means the material, excluding filters, placed in the useful beam; and
 - b. "Secondary protective barrier" means the material which attenuates stray radiation.
99. "Protective glove" means a glove made of radiation absorbing materials used to reduce radiation exposure.
100. "Qualified expert" means an individual having the knowledge, training, and experience to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs, for example, individuals certified in the appropriate field by the American board of radiology, or the American board of health physics, or the American board of medical physics, or those having equivalent qualifications. With reference to the calibration of radiation therapy equipment, "qualified expert" means an individual having, in addition to the above qualifications, training and experience in the clinical applications of radiation physics to radiation therapy, for example, individuals certified in therapeutic radiological physics or x-ray and radium physics by the American board of radiology, or those having equivalent qualifications.
101. "Radiation" means x-rays and gamma rays, which are capable of producing ions. For purposes of this chapter, ionizing radiation is an equivalent term.
102. "Radiation detector" means a device which in the presence of radiation provides a signal or other indication suitable for use in measuring one or more quantities of incident radiation.

103. "Radiation exposure" means the quotient of dQ by dm where "dQ" is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass "dm" are completely stopped in air. The SI unit of radiation exposure is the coulomb per kilogram (C/kg). (See section 33.1-10-01-14 units of exposure, dose, and activity for the special unit equivalent "roentgen" (R).)
104. "Radiation exposure rate" means the radiation exposure per unit of time, such as R/min, mR/h, etc.
105. "Radiation machine" means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.
106. "Radiation therapy simulation system" means a radiographic, fluoroscopic, or computed tomography x-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.
107. "Radiograph" means an image receptor on which the image is created directly or indirectly by an x-ray pattern and results in a permanent record.
108. "Radiographic imaging system" means any system whereby a permanent or temporary image is recorded on an image receptor by the action of ionizing radiation.
109. "Radiological physicist" means an individual who:
- a. Is certified by the American board of radiology in therapeutic radiological physics, radiological physics, or x-ray and gamma-ray physics;
 - b. Has a bachelor's degree in one of the physical sciences or engineering and three year's full-time experience working in therapeutic or diagnostic radiological physics under the direction of a physicist certified by the American board of radiology. The work duties must include duties involving the calibration and spot checks of a medical accelerator or a sealed source teletherapy unit; or
 - c. Has a master's or a doctor's degree in physics, biophysics, radiological physics, health physics, or engineering; has had one year's full-time training in therapeutic or diagnostic radiological physics; and has had one year's full-time work experience in a radiotherapy facility where the individual's duties involve calibration and spot checks of a medical accelerator or a sealed source teletherapy unit.
110. "Rating" means the operating limits as specified by the component manufacturer.
111. "Recording" means producing a permanent form of an image resulting from x-ray photons.
112. "Registrant" means any person, group, or facility who is registered with the department and is legally obligated to register with the department pursuant to North Dakota Century Code chapter 23.1-02.
113. "Roentgen" or "(R)" means the special unit of exposure. One roentgen equals two hundred fifty-eight millionth of a coulomb per kilogram of air.

114. "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction (see "direct scattered radiation").
115. "Secondary dose monitoring system" means a system which will terminate irradiation in the event of failure of the primary dose monitoring system.
116. "Secondary protective barrier" (see "protective barrier").
117. "Shutter" means a device attached to the tube housing assembly which can intercept the entire cross-sectional area of the useful beam and which has a lead equivalency not less than that of the tube housing assembly.
118. "SI" means the abbreviation for the international system of units.
119. "SID" has the same meaning as "source-image receptor distance".
120. "Source" means the location or material, or both, from which the radiation emanates.
121. "Source-image receptor distance" means the distance from the source to the center of the input surface of the image receptor.
122. "Spot check" means a procedure which is performed to assure that a previous calibration continues to be valid.
123. "Spot film" means a radiograph which is made during a fluoroscopic examination to permanently record conditions which exist during that fluoroscopic procedure.
124. "Spot-film device" means a device intended to transport or position a radiographic image receptor between the x-ray source and fluoroscopic image receptor. It includes a device intended to hold a cassette over the input end of an image intensifier for the purpose of making a radiograph.
125. "Stationary x-ray equipment" (see "x-ray equipment").
126. "Stray radiation" means the sum of leakage and scattered radiation.
127. "Survey" means an evaluation of the radiological conditions which may include tests, physical examinations, and measurements of levels of radiation.
128. "Technique factors" means the conditions of operation. They are specified as follows:
- a. For capacitor energy storage equipment, peak tube potential in kilovolts and quantity of charge in milliampere second.
 - b. For field emission equipment rated for pulsed operation, peak tube potential in kilovolts and number of x-ray pulses.
 - c. For CT x-ray systems designed for pulsed operation, peak tube potential in kilovolts, scan time in seconds, and either tube current in milliampere, x-ray pulse width in seconds, and the number of x-ray pulses per scan, or the product of tube current, x-ray pulse width, and the number of x-ray pulses in milliampere second.

- d. For CT x-ray systems not designed for pulsed operation, peak tube potential in kilovolts, and either tube current in milliamperes and scan time in seconds, or the product of tube current and exposure time in milliamperes second and the scan time when the scan time and exposure time are equivalent.
 - e. For all other equipment, peak tube potential in kilovolt and either tube current in milliamperes and exposure time in seconds, or the product of tube current and exposure time in milliamperes second.
129. "Termination of irradiation" means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.
 130. "Tomogram" means the depiction of x-ray attenuation properties of a section through the body.
 131. "Traceable to a national standard" means that a quantity or a measurement has been compared to a national standard directly or indirectly through one or more intermediate steps and that all comparisons have been documented.
 132. "Tube" means an x-ray tube, unless otherwise specified.
 133. "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage and/or filament transformers and other appropriate elements when such are contained within the tube housing.
 134. "Tube rating chart" means the set of curves which specify the rated limits of operation of the tube in terms of the technique factors.
 135. "Useful beam" means the radiation emanating from the tube housing port or the radiation head and passing through the aperture of the beam-limiting device when the exposure controls are in a mode to cause the system to produce radiation.
 136. "Variable-aperture beam-limiting device" means a beam-limiting device which has capacity for stepless adjustment of the x-ray field size at a given source-image receptor distance.
 137. "Visible area" means that portion of the input surface of the image receptor over which incident x-ray photons are producing a visible image.
 138. "Wedge filter" means an added filter effecting continuous progressive attenuation on all or part of the useful beam.
 139. "Whole body" means for purposes of external exposure, head, trunk including male gonads, arms above the elbows, or legs below the knees.
 140. "X-ray exposure control" means a device, switch, button, or other similar means by which the operator initiates or terminates, or both, the radiation exposure. It may include equipment such as timers, phototimers, automatic brightness stabilizers, and similar devices.

141. "X-ray equipment" means an x-ray system, subsystem, or component thereof. Types of x-ray equipment are as follows:
- a. "Mobile x-ray equipment" means x-ray equipment mounted on a permanent base with wheels or casters for moving while completely assembled.
 - b. "Portable x-ray equipment" means x-ray equipment designed to be hand-carried.
 - c. "Stationary x-ray equipment" means x-ray equipment which is installed in a fixed location.
 - d. "Hand-held dental x-ray equipment" means any dental x-ray equipment which is designated to be physically held during x-ray exposure.
142. "X-ray field" means that area of the intersection of the useful beam and any one of the set of planes parallel to and including the plane of the image receptor, whose perimeter is the locus of points at which the radiation exposure rate is one-fourth of the maximum in the intersection.
143. "X-ray high-voltage generator" means a device which transforms electrical energy from the potential supplied by the x-ray control to the tube operating potential. The device may also include means for transforming alternating current to direct current, filament transformers for the x-ray tube, high-voltage switches, electrical protective devices, and other appropriate elements.
144. "X-ray system" means an assemblage of components for the controlled production of x-rays. It includes minimally an x-ray high-voltage generator, an x-ray control, a tube housing assembly, a beam-limiting device, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.
145. "X-ray tube" means any electron tube which is designed for the conversion of electrical energy into x-ray energy.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-03. General requirements.

1. Administrative controls.

- a. Registrant. The registrant shall be responsible for directing the operation of the x-ray systems which have been registered with the department. The registrant or the registrant's agent shall assure that the requirements are met in the operation of the x-ray system.
 - (1) An x-ray system which does not meet the requirements of this article shall not be operated for diagnostic or therapeutic purposes.

(2) All individuals, except those listed in part 1 of appendix G, prior to operating the x-ray systems shall be adequately instructed in the safe operating procedures and be competent in the safe use of the equipment commensurate with the size, scope, and nature of the service as outlined in appendix F. In addition, all individuals shall meet the specific requirements as outlined in subparagraph a or b. The department may use interview, observation, or testing to determine compliance. Records must be maintained by the registrant to demonstrate compliance with this paragraph.

(a) General diagnostic operators are not limited in scope of practice. Obtaining general diagnostic operator status will consist of one of the following:

[1] Obtain board eligibility or board certification with the American registry of radiologic technologists (ARRT);

[2] Obtain board eligibility or board certification with the American chiropractic registry of radiologic technologists (ACRRT); and only perform x-ray examinations for chiropractic services;

[3] Receive department approval, through individual consideration, by demonstration of an acceptable level of education and clinical training; or

[4] Demonstrate current enrollment in an educational program accredited by a process acceptable to the department, and provide documentation of competency in all routine radiographic procedures and specialty views.

(b) Limited x-ray machine operators are limited in scope of practice to only those procedures listed in appendix I, except as allowed in subparagraph c. Limited x-ray machine operators must meet the prerequisite qualifications, receive training, and demonstrate competence as follows:

[1] Limited x-ray machine operators shall have successfully completed the course of training required by one of the allied health professions listed in part 2 of appendix G;

[2] Complete at least eighty hours of didactic instruction at a single training program providing didactic instruction in accordance with part 1 of appendix H;

[3] Complete the three-hour self-study course designed by the department of environmental quality; and

[4] Complete the clinical experience requirements in part 2 of appendix H.

(c) Limited x-ray machine operators may only conduct diagnostic x-ray examinations outside the scope of practice of appendix I in accordance with the following:

[1] When it is determined to be an emergency and ordered by individuals listed in part 3 of appendix G. The individual requesting the procedures must comply with subitems a, b, and c.

[a] The requesting individual must provide a written order specifying what types of diagnostic x-ray examinations outside the scope of procedures listed in appendix I are requested. The order shall contain an explanation of the emergency nature or medical reason for the order.

[b] The requesting individual must provide direct supervision during the time the x-ray image is obtained.

[c] The facility must keep records of all emergency x-ray procedures ordered under this subparagraph.

[2] When a practice requires a specific view or examination outside the scope of practice listed in appendix I to be conducted on a routine basis, and the facility has only limited x-ray machine operators, application may be made to the department requesting approval for a limited x-ray machine operator to perform the procedure. This allowance shall be limited to the facility, the specific individual, and the procedure requested. After an allowance has been granted, reapplication and reauthorization are not necessary for the same procedure. The application for allowance should include the following:

[a] Documentation which demonstrates the need for the specific view;

[b] Documentation on forms supplied by the department indicating that each individual for which the request is made has demonstrated competence in the procedure; and

[c] Proof of additional didactic instruction or completion of examination as deemed necessary by the department for each individual.

[3] When it is not a computed tomography examination.

(d) Limited x-ray machine operator implementation period. Individuals who begin taking x-rays after one year from March 1, 2003, will have to meet all of the requirements of this paragraph before operating the x-ray system.

- (3) General diagnostic and limited diagnostic x-ray operators shall maintain continuing education units as outlined in appendix K.
- (4) A chart shall be provided in the vicinity of the diagnostic x-ray system's control panel, which specifies for all examinations performed with that system the following information:
- (a) Patient's body part and anatomical size or body thickness, or age (for pediatrics), versus technique factors to be utilized.
 - (b) Type and size of the film or film-screen combination to be used.
 - (c) Type and focal distance of the grid to be used, if any.
 - (d) Source-image receptor distance to be used (except for dental intraoral radiography).
 - (e) Type and location of placement of gonad shielding to be used.
 - (f) For mammography, indication of kVp/target/filter combination.
- (5) The registrant of a facility shall create and make available to x-ray operators written safety procedures, including patient holding restrictions and any restrictions of the operating technique required for the safe operation of the particular x-ray system. The operator shall be able to demonstrate familiarity with these procedures.
- (6) Except for human patients who cannot be moved out of the room, only the staff and ancillary personnel or other persons required for the medical procedure or training shall be in the room during the radiographic exposure. Other than the patient being examined:
- (a) All individuals shall be positioned such that no part of the body will be struck by the useful beam unless protected by not less than five-tenths millimeter lead equivalent material.
 - (b) The x-ray operator, other staff, ancillary personnel, and other persons required for the x-ray procedure shall be protected from the direct scatter radiation by protective aprons or whole body protective barriers of not less than twenty-five one-hundredths millimeter lead equivalent material.
 - (c) Human patients who cannot be removed from the room shall be protected from the direct scatter radiation by whole body protective barriers of not less than twenty-five one-hundredths millimeter lead equivalent material or shall be so positioned that the nearest portion of the body is at least two meters from both the tube head and the nearest edge of the image receptor.
- (7) Gonad shielding of not less than five-tenths millimeter lead equivalent material must be used for human patients who have not passed the reproductive age

during radiographic procedures in which the gonads are in the useful beam, except for cases in which this would interfere with the diagnostic procedure.

(8) Individuals may not be exposed to the useful beam except for healing arts purposes and when such exposure has been authorized by a licensed practitioner of the healing arts. This provision specifically prohibits deliberate exposure for the following purposes:

(a) Exposure of an individual for training, demonstration, or other non-healing-arts purposes.

(b) Exposure of an individual for the purpose of healing arts screening except as authorized by paragraph 12.

(9) When a patient or film must be provided with auxiliary support during a radiation exposure:

(a) Mechanical holding devices shall be used when the technique permits. The safety rules, required by this section shall list individual projections where holding devices cannot be utilized.

(b) Written safety procedures, as required by paragraph 4, shall indicate the requirements for selecting a holder and the procedure the holder shall follow.

(c) The human holder shall be instructed in personal radiation safety and protected as required by paragraph 6.

(d) No individual shall be used routinely to hold film or patients.

(e) In those cases where the patient must hold the film, except during intraoral examinations, any portion of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than five-tenths millimeter lead equivalent material.

(f) A record shall be made of the examination and shall include the name of the human holder, date of the examination, number of exposures, and technique factors utilized for the exposure.

(g) Each facility shall have leaded aprons and gloves available in sufficient numbers to provide protection to all personnel who are involved with x-ray operations and who are otherwise not shielded.

(10) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized. This is interpreted to include but not limited to:

(a) The speed of film and screen combinations shall be the fastest speed consistent with the diagnostic objective of the examinations. Film cassettes without intensifying screens shall not be used for any routine diagnostic radiological imaging, with the exception of veterinary

radiography, therapeutic portal imaging, and standard film packets for intraoral use in dental radiography.

(b) The radiation exposure to the patient shall be the minimum exposure required to produce images of good diagnostic quality.

(c) Proper film handling and processing procedures. Each installation using a radiographic x-ray system and using analog image receptors (e.g., radiographic film) shall have available suitable equipment for handling and processing radiographic film in accordance with appendix D.

(d) Portable or mobile equipment shall be used only for examinations where it is impractical to transfer the patients to a stationary x-ray installation.

(e) X-ray systems subject to section 33.1-10-06-06 shall not be utilized in procedures where the source to patient distance is less than thirty centimeters, except for veterinary systems.

(f) If grids are used between the patient and the image receptor to decrease scatter to the film and improve contrast, the grid shall:

[1] Be positioned properly, for example, tube side facing the right direction and grid centered to the central ray; and

[2] If the grid is of the focused type, be of the proper focal distance for the source image distances being used.

(11) All individuals who are associated with the operation of an x-ray system are subject to the requirements of section 33.1-10-04.2-01 [10 CFR 20.1201, 20.1207, and 20.1208]. In addition:

(a) When protective clothing or devices are worn on portions of the body and a monitoring device is required, at least one such monitoring device shall be utilized as follows:

[1] When an apron is worn, the monitoring device shall be worn at the collar outside of the apron.

[2] The dose to the whole body based on the maximum dose attributed to the most critical organ shall be recorded in the reports required by section 33.1-10-04.2-01 [10 CFR 20.2206]. If more than one device is used and a record is made of the data, each dose shall be identified with the area where the device was worn on the body.

(b) Exposure of a personnel monitoring device to deceptively indicate a dose delivered to an individual is prohibited.

(12) Healing arts screening. Any person proposing to conduct a healing arts screening program shall not initiate such a program without prior approval of the department. When requesting such approval, that person shall submit the information outlined in appendix E. If any information submitted to the

department becomes invalid or outdated, the department shall be immediately notified.

b. Information and maintenance record and associated information. The registrant shall maintain the following information for each x-ray system for inspection by the department:

(1) Maximum rating of technique factors.

(2) Model and serial numbers of all major components and user's manuals for those components.

(3) Aluminum equivalent filtration of the useful beam, including any routine variation.

(4) Tube rating charts and cooling curves.

(5) Records of surveys, calibrations, maintenance, and modifications performed on the x-ray system with the names of persons who performed such services.

(6) A scale drawing of the room in which a stationary x-ray system is located with such drawing indicating the use of areas adjacent to the room and an estimation of the extent of occupancy by an individual in such areas. In addition, the drawing shall include:

(a) The results of a survey for radiation levels present at the operator's position and at pertinent points outside the room at specified test conditions; or

(b) The type and thickness of materials, or lead equivalency, of each protective barrier.

(7) A copy of all correspondence with this department regarding that x-ray system.

c. X-ray log.

(1) Except for veterinary facilities, each facility shall maintain an x-ray log containing the patient's name, the type of examinations, the dates those examinations were performed, and the name of the x-ray operator. When the patient or film must be provided with human auxiliary support, the name of the human holder shall be recorded.

(2) Veterinary facilities shall maintain an x-ray utilization log indicating the type of examinations, the date of the examinations and if the patient or film was provided with human auxiliary support, the name of the human holder.

2. Plan review.

a. Prior to construction, the floor plans, shielding specifications, and equipment arrangement of all new installations, or modifications of existing installations,

utilizing ionizing radiation machines shall be submitted to the department for review and approval. The required information is denoted in appendices A, B, and C.

- b. The department may require the applicant to utilize the services of a qualified expert to determine the shielding requirements prior to the plan review and approval.
- c. The approval of such plans shall not preclude the requirement of additional modifications should a subsequent analysis of operating conditions indicate the possibility of an individual receiving a dose in excess of the limits prescribed in section 33.1-10-04.2-01 [10 CFR 20.1201, 20.1207, 20.1208, and 20.1301].

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-04. General requirements for all diagnostic x-ray systems.

In addition to other requirements of this chapter, all diagnostic x-ray systems shall meet the following requirements:

1. **Warning label.** The control panel containing the main power switch shall bear the warning statement, legible and accessible to view: "WARNING: This x-ray unit may be dangerous to patient and operator unless safe exposure factors and operating instructions are observed."
2. **Battery charge indicator.** On battery-powered x-ray generators, visual means shall be provided on the control panel to indicate whether the battery is in a state of charge adequate for proper operation.
3. **Leakage radiation from the diagnostic source assembly.** The leakage radiation from the diagnostic source assembly measured at a distance of one meter in any direction from the source shall not exceed one hundred milliroentgens in one hour when the x-ray tube is operated at its leakage technique factors. Compliance shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.
4. **Radiation from components other than the diagnostic source assembly.** The radiation emitted by a component other than the diagnostic source assembly shall not exceed two milliroentgens in one hour at five centimeters from any accessible surface of the component when it is operated in an assembled x-ray system under any conditions for which it was designed. Compliance shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.
5. **Beam quality.**
 - a. **Half-value layer.**
 - (1) The half-value layer (HVL) of the useful beam for a given x-ray tube potential shall not be less than the values shown in table I. If it is necessary to determine

such half-value layer at an x-ray tube potential which is not listed in table I, linear interpolation or extrapolation may be made.

<u>TABLE I</u>				
<u>Half-Value Layer in Millimeters Aluminum</u>				
<u>Design Operating Range (Kilovolts Peak)</u>	<u>Measured Potential (Kilovolts Peak)</u>	<u>Dental Intraoral Manufactured Before Aug. 1, 1974, and on or After Dec. 1, 1980</u>	<u>Diagnostic X-Ray Systems Manufactured Prior to June 10, 2006</u>	<u>Diagnostic X-Ray Systems Manufactured on or After June 10, 2006</u>
<u>Below 51</u>	<u>30</u>	<u>N/A</u>	<u>0.3</u>	<u>0.3</u>
	<u>40</u>	<u>N/A</u>	<u>0.4</u>	<u>0.4</u>
	<u>50</u>	<u>1.5</u>	<u>0.5</u>	<u>0.5</u>
<u>51 to 70</u>	<u>51</u>	<u>1.5</u>	<u>1.2</u>	<u>1.3</u>
	<u>60</u>	<u>1.5</u>	<u>1.3</u>	<u>1.5</u>
	<u>70</u>	<u>1.5</u>	<u>1.5</u>	<u>1.8</u>
<u>Above 70</u>	<u>71</u>	<u>2.1</u>	<u>2.1</u>	<u>2.5</u>
	<u>80</u>	<u>2.3</u>	<u>2.3</u>	<u>2.9</u>
	<u>90</u>	<u>2.5</u>	<u>2.5</u>	<u>3.2</u>
	<u>100</u>	<u>2.7</u>	<u>2.7</u>	<u>3.6</u>
	<u>110</u>	<u>3.0</u>	<u>3.0</u>	<u>3.9</u>
	<u>120</u>	<u>3.2</u>	<u>3.2</u>	<u>4.3</u>
	<u>130</u>	<u>3.5</u>	<u>3.5</u>	<u>4.7</u>
	<u>140</u>	<u>3.8</u>	<u>3.8</u>	<u>5.0</u>
	<u>150</u>	<u>4.1</u>	<u>4.1</u>	<u>5.4</u>

(2) For capacitor energy storage equipment, compliance with the requirements of this subsection shall be determined with the system fully charged and a setting of ten mAs for each exposure.

(3) The required minimal aluminum equivalent filtration shall include the filtration contributed by all materials which are permanently present between the source and the patient.

(4) For mammography systems with molybdenum filter and molybdenum target, measured half-value layer (HVL) with compression device in the x-ray beam shall be greater than or equal to the kilovolts peak (kVp) divided by one hundred, millimeters aluminum and less than or equal to the kilovolts peak (kVp) divided by one hundred plus one-tenth millimeter aluminum.

$$\text{HVL} \geq (\text{kVp}/100) \text{ mmAl and } < (\text{kVp}/100) + 0.1 \text{ mmAl}$$

- b. Filtration controls. For x-ray systems which have variable kilovolts peak and variable filtration for the useful beam, a device shall link the kilovolts peak selector with the filters and shall prevent an exposure unless the minimum amount of filtration required by paragraph 1 of subdivision a is in the useful beam for the given kilovolts peak which has been selected.
- 6. **Multiple tubes.** Where two or more radiographic tubes are controlled by one exposure switch, the tube or tubes which have been selected shall be clearly indicated prior to initiation of the exposure. This indication shall be both on the x-ray control panel and at or near the tube housing assembly which has been selected.
- 7. **Mechanical support of tube head.** The tube housing assembly supports shall be adjusted such that the tube housing assembly will remain stable during an exposure unless tube housing movement is a designed function of the x-ray system.
- 8. **Technique indicators.**
 - a. The technique factors to be used during an exposure shall be indicated before the exposure begins, except when automatic exposure controls are used, in which case the technique factors which are set prior to the exposure shall be indicated.
 - b. The requirements of subdivision a may be met by permanent markings on equipment having fixed technique factors. Indication of technique factors shall be visible from the operator's position except in the case of spot films made by the fluoroscopist.
- 9. **Maintaining compliance.** Diagnostic x-ray systems and their associated components used on humans and certified pursuant to the federal x-ray equipment performance standard (21 CFR part 1020) shall be maintained in compliance with applicable requirements of that standard.
- 10. **Locks.** All position locking, holding, and centering devices on x-ray system components and systems shall function as intended.
- 11. **Structural shielding requirements** (see appendix C).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-05. Fluoroscopic x-ray systems.

All fluoroscopic x-ray systems shall be image-intensified and meet the following requirements:

1. **Limitation of useful beam.**

a. **Primary barrier.**

- (1) The fluoroscopic imaging assembly shall be provided with a primary protective barrier which intercepts the entire cross-section of the useful beam at any source-image receptor distance (SID).

(2) The x-ray tube used for fluoroscopy shall not produce x-rays unless the barrier is in position to intercept the entire useful beam.

b. X-ray field.

(1) For certified fluoroscopic systems with or without a spot-film device, neither the length nor the width of the x-ray field in the plane of the image receptor shall exceed that of the visible area of the image receptor by more than three percent of the source-image receptor distance. The sum of the excess length and the excess width shall be no greater than four percent of the source-image receptor distance.

(2) For uncertified fluoroscopic systems with a spot-film device, the x-ray beam with the shutters fully opened (during fluoroscopy or spot filming) shall be no larger than the largest spot-film size for which the device is designed. Measurements shall be made at the maximum source image distance available but at no less than twenty centimeters tabletop to the film plane distance.

(3) For uncertified fluoroscopic systems without a spot-film device, the requirements of paragraph 1 apply.

(4) Other requirements for fluoroscopic beam limitation:

(a) Means shall be provided to permit further limitation of the field. Beam-limiting devices manufactured after May 22, 1979, and incorporated in equipment with a variable source-image receptor distance and/or a visible area of greater than three hundred square centimeters shall be provided with means for stepless adjustment of the x-ray field.

(b) All equipment with a fixed source-image receptor distance and a visible area of three hundred square centimeters or less shall be provided with either stepless adjustment of the x-ray field or with means to further limit the x-ray field size at the plane of the image receptor to one hundred twenty-five square centimeters or less. Stepless adjustment shall, at the greatest source-image receptor distance, provide continuous field sizes from the maximum obtainable to a field size of five by five centimeters or less.

(c) For equipment manufactured after February 25, 1978, when the angle between the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(d) Compliance shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor. For noncircular x-ray fields used with circular image receptors, the error in alignment shall be determined along the length and width dimensions of the x-ray field which pass through the center of the visible area of the image receptor.

(5) Spot-film devices shall meet the following additional requirements:

(a) Means shall be provided between the source and the patient for adjustment of the x-ray field size in the plane of the film to the size of that portion of the film which has been selected on the spot-film selector. Such adjustment shall be automatically accomplished except when the x-ray field size in the plane of the film is smaller than that of the selected portion of the film. For spot-film devices manufactured after June 21, 1979, if the x-ray field size is less than the size of the selected portion of the film, the means for adjustment of the field size shall be only at the operator's option.

(b) Neither the length nor the width of the x-ray field in the plane of the image receptor shall differ from the corresponding dimensions of the selected portion of the image receptor by more than three percent of the source-image receptor distance when adjusted for full coverage of the selected portion of the image receptor. The sum, without regard to sign, of the length and width differences shall not exceed four percent of the source-image receptor distance.

(c) It shall be possible to adjust the x-ray field size in the plane of the film to a size smaller than the selected portion of the film. The minimum field size at the greatest source-image receptor distance shall be equal to, or less than, five centimeters by five centimeters.

(d) The center of the x-ray field in the plane of the film shall be aligned with the center of the selected portion of the film to within two percent of the source-image receptor distance.

(e) On spot-film devices manufactured after February 25, 1978, if the angle between the plane of the image receptor and beam axis is variable, means shall be provided to indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor, and compliance shall be determined with the beam axis indicated to be perpendicular to the plane of the image receptor.

(6) If a means exists to override any of the automatic x-ray field size adjustments required in subdivision b of subsection 1 that means:

(a) Must be designed for use only in the event of system failure.

(b) Must incorporate a signal visible at the fluoroscopist's position which will indicate whenever the automatic field size adjustment is overridden.

(c) Must be clearly and durably labeled as follows:

FOR X-RAY FIELD
LIMITATION SYSTEM FAILURE

2. **Activation of the fluoroscopic tube.** X-ray production in the fluoroscopic mode shall be controlled by a device which requires continuous pressure by the fluoroscopist for the

entire time of any exposure. When recording serial fluoroscopic images, the fluoroscopist shall be able to terminate the x-ray exposure or exposures at any time, but means may be provided to permit completion of any single exposure of the series in process.

3. Radiation exposure rate limits.

a. Entrance exposure rate allowable limits.

(1) Fluoroscopic equipment which is provided with automatic exposure rate control:

(a) The radiation exposure measured at the point where the center of the useful beam enters the patient shall not exceed two and fifty-eight hundredths millicoulomb per kilogram [10 roentgens] per minute, except during recording of fluoroscopic images or when provided with optional high level control.

(b) When provided with optional high level control, the equipment shall not be operable at any combination of tube potential and current which will result in a radiation exposure rate in excess of one and twenty-nine hundredths millicoulomb per kilogram [5 roentgens] per minute at the point where the center of the useful beam enters the patient unless the high level control is activated.

[1] When the high level control is activated, the equipment shall not be operable at any combination of tube potential and current that will result in an exposure rate in excess of five and sixteen hundredths millicoulomb per kilogram [20 roentgens] per minute at the point where the center of the useful beam enters the patient.

[2] Special means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator.

[3] A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

(2) Fluoroscopic equipment which is not provided with automatic exposure rate control:

(a) The radiation exposure measured at the point where the center of the useful beam enters the patient shall not exceed one and twenty-nine hundredths millicoulomb per kilogram [5 roentgens] per minute, except during recording of fluoroscopic images or when provided with an optional high level control and the high level control is activated.

[1] When the high level control is activated, the equipment shall not be operable at any combination of tube potential and current that will result in an exposure rate in excess of five and sixteen hundredths

millicoulomb per kilogram [20 roentgens] per minute at the point where the center of the useful beam enters the patient.

[2] Special means of activation of high level controls shall be required. The high level control shall only be operable when continuous manual activation is provided by the operator.

[3] A continuous signal audible to the fluoroscopist shall indicate that the high level control is being employed.

(3) Compliance with the requirements of subsection 3 of this section shall be determined as follows:

(a) Movable grids and compression devices shall be removed from the useful beam during the measurement.

(b) If the source is below the table, the radiation exposure rate shall be measured one centimeter above the tabletop or cradle.

(c) If the source is above the table, the radiation exposure rate shall be measured at thirty centimeters above the tabletop with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement.

(d) In a C-arm type of fluoroscope, both stationary and mobile units shall meet the entrance exposure rate limits specified in paragraphs 1, 2, and 3 of subdivision a of subsection 3, shall be measured thirty centimeters from the input surface of the fluoroscopic imaging assembly with the source positioned at any available source-image receptor distance provided that the end of the spacer assembly or beam-limiting device is not closer than thirty centimeters from the input surface of the fluoroscopic imaging assembly.

(e) In a lateral type of fluoroscope, the exposure rate shall be measured at a point fifteen centimeters from the centerline of the x-ray table and in the direction of the x-ray source with the end of the beam-limiting device or spacer positioned as closely as possible to the point of measurement. If the tabletop is movable, it shall be positioned as closely as possible to the lateral x-ray source, with the end of the beam-limiting device or spacer no closer than fifteen centimeters to the centerline of the x-ray table.

(4) Periodic measurement of entrance exposure rate shall be performed by a qualified expert for both typical and maximum values as follows:

(a) Such measurements shall be made annually or after any maintenance of the system which might affect the radiation exposure rate.

(b) Results of these measurements shall be posted where any fluoroscopist may have ready access to such results while using the fluoroscope and

in the record required in paragraph 5 of subdivision b of subsection 1 of section 33.1-10-06-03. Results of the measurements shall include the roentgen per minute, as well as the technique factors used to determine such results. The name of the person performing the measurements and the date the measurements were performed shall be included in the results.

(c) Conditions of periodic measurements of typical entrance exposure rate are as follows:

[1] The measurement shall be made under the conditions that satisfy the requirements of paragraph 4.

[2] The kilovolts peak, mA, and other selectable parameters shall be the settings typical of clinical use on a twenty-three centimeters thick abdominal patient.

[3] The x-ray systems that incorporate automatic exposure control shall have sufficient material placed in the useful beam to produce a milliamperage or kilovoltage, or both, to satisfy the conditions of item 2.

[4] X-ray systems that do not incorporate an automatic exposure control shall utilize a milliamperage typical of clinical use of the x-ray system. Materials should be placed in the useful beam when conducting these periodic measurements to protect the imaging system.

(d) Conditions of periodic measurements of maximum entrance exposure rate are as follows:

[1] The measurement shall be made under the conditions that satisfy the requirements of paragraph 3.

[2] The kVp, mA, and other selectable parameters shall be the maximum selectable parameters of clinical use of the x-ray system.

[3] The x-ray systems that incorporate automatic exposure control shall have sufficient material placed in the useful beam to produce a kVp, mA, and other selectable parameters to satisfy the conditions of item 2.

[4] X-ray systems that do not incorporate an automatic exposure control shall utilize the maximum kVp, mA, and other selectable parameters of clinical use of the x-ray system. Materials should be placed in the useful beam when conducting these periodic measurements to protect the imaging system.

4. Barrier transmitted radiation rate limits.

a. The radiation exposure rate due to transmission through the primary protective barrier with the attenuation block in the useful beam, combined with radiation from the image intensifier, shall not exceed five hundred sixteen thousandths microcoulomb per kilogram [2 milliroentgens] per hour at ten centimeters from any accessible surface of the fluoroscopic imaging assembly beyond the plane of the image receptor for each roentgen (C/kg) per minute of entrance exposure rate.

b. Measuring compliance of barrier transmission.

(1) The radiation exposure rate due to transmission through the primary protective barrier combined with radiation from the image intensifier shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.

(2) If the source is below the tabletop, the measurement shall be made with the input surface of the fluoroscopic imaging assembly positioned thirty centimeters above the tabletop.

(3) If the source is above the tabletop and the source-image receptor distance is variable, the measurement shall be made with the end of the beam-limiting device or spacer as close to the tabletop as it can be placed, provided that it shall not be closer than thirty centimeters.

(4) Movable grids and compression devices shall be removed from the useful beam during the measurement.

5. **Indication of potential and current.** During fluoroscopy and cinefluorography, the kilovolt and the milliampere shall be continuously indicated.

6. **Indication of air kerma rate and cumulative air kerma.** Machines manufactured on or after June 10, 2006, shall provide displays of values of air kerma rate and cumulative air kerma and shall be viewable from the x-ray operator position.

a. When the x-ray tube is activated and the number of images produced per unit time is greater than six images per second, the air kerma rate in mGy/minute shall be continuously displayed and updated at least once every second.

b. The cumulative air kerma in units of mGy shall be displayed either within five seconds of termination of an exposure or displayed continuously and updated at least once every five seconds.

c. The display of the air kerma rate shall be clearly distinguishable from the display of the cumulative air kerma.

d. The air kerma rate and cumulative air kerma shall represent the value of conditions of free-in-air irradiation at one of the following reference locations specified according to the type of fluoroscope.

(1) For fluoroscopies with x-ray source below the x-ray table, x-ray source above the table, or of lateral type, the reference locations shall be the respective

locations specified in subparagraphs 33.1-10-05.3(3)(b), (c), and (e) for measuring compliance with air kerma rate limits.

(2) For C-arm fluoroscopies, the reference location shall be fifteen cm from the isocenter toward the x-ray source along the beam axis. Alternatively, the reference location shall be at a point specified by the manufacturer to represent the location of the intersection of the x-ray beam with the patient's skin.

e. Means shall be provided to reset to zero the display of cumulative air kerma prior to the commencement of a new examination or procedure.

f. The displayed air kerma rate and cumulative air kerma shall not deviate from the actual values by more than plus or minus thirty-five percent over the range of six mGy/minute (0.6 R/min) and one hundred mGy (10 R) to the maximum indication of air kerma rate and cumulative air kerma, respectively. Compliance shall be determined with an irradiation time greater than three seconds.

7. **Source-skin distance.** The source to skin distance shall not be less than:

a. Thirty-eight centimeters on stationary fluoroscopes installed after August 1, 1974.

b. Thirty-five and one-half centimeters on stationary fluoroscopes which were in operation prior to August 1, 1974.

c. Thirty centimeters on all mobile fluoroscopes.

d. Twenty centimeters for all mobile fluoroscopes used for specific surgical applications.

8. **Fluoroscopic timer.**

a. Means shall be provided to preset the cumulative on-time of the fluoroscopic tube. The maximum cumulative time of the timing device shall not exceed five minutes without resetting.

b. A signal audible to the fluoroscopist shall indicate the completion of any preset cumulative on-time. Such signal shall continue to sound while x-rays are produced until the timing device is reset.

9. **Control of scattered radiation.**

a. Fluoroscopic table designs when combined with procedures utilized shall be such that no unprotected part of any staff or ancillary individual's body shall be exposed to unattenuated scattered radiation which originates from under the table. The attenuation required shall be not less than twenty-five one-hundredths millimeter lead equivalent.

b. Equipment configuration when combined with procedures shall be such that no portion of any staff or ancillary individual's body, except the extremities, shall be

exposed to the unattenuated scattered radiation emanating from above the tabletop unless that individual:

(1) Is at least one hundred twenty centimeters from the center of the useful beam;
or

(2) The radiation has passed through not less than twenty-five one-hundredths millimeter lead equivalent material, including, but not limited to, drapes, bucky-slot cover-sliding or folding panel, or self-supporting curtains, in addition to any lead equivalency provided by the protective apron referred to in paragraph 5 of subdivision a of subsection 1 of section 33.1-10-06-03.

c. The department may grant exceptions to subdivision b of this subsection in some special procedures where a sterile field will not permit the use of the normal protective barriers. Where the use of prefitted sterilized covers for the barriers is practical, the department shall not permit such exception.

10. **Spot-film exposure reproducibility.** Fluoroscopic systems equipped with spot-film mode shall meet the exposure reproducibility requirements of subsection 5 of section 33.1-10-06-06 when operating in the spot-film mode.

11. **Radiation therapy simulation system.** Radiation therapy simulation systems shall be exempt from all the requirements of subsections 1, 3, 4, and 8 of section 33.1-10-06-05 provided that:

a. Such systems are designed and used in such a manner that no individual other than the patient is in the x-ray room during periods of time when the system is producing x-rays; and

b. Such systems as do not meet the requirements of subsection 7 of section 33.1-10-06-05 are provided with a means of indicating the cumulative time that an individual patient has been exposed to x-rays. Procedures shall require in such cases that the timer be reset between examinations.

12. **Structural shielding requirements** (see appendix E).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-06. Radiographic systems other than fluoroscopic, dental intraoral, bone densitometry, or computed tomography x-ray systems.

1. **Beam limitation requirements for systems without positive beam limitation including portable x-ray systems.** The useful beam shall be limited to the area of clinical interest.

a. General purpose stationary and mobile x-ray systems including veterinary systems (other than portable) installed after January 1, 1998.

- (1) There shall be provided a means for independent length and width stepless adjustment to the size of the x-ray field.
- (2) Means shall be provided for visually defining the perimeter of the x-ray field. The total misalignment of the edges of the visually defined field with the respective edges of the x-ray field along either the length or width of the visually defined field shall not exceed two percent of the distance from the source to the center of the visually defined field when the surface upon which it appears is perpendicular to the axis of the x-ray beam.
- (3) The department may grant an exemption to paragraphs 1 and 2 on noncertified x-ray systems, provided the registrant makes a written application for such exemption and demonstrates in the application:
 - (a) That it is impractical to comply with paragraphs 1 and 2; and
 - (b) The purpose of paragraphs 1 and 2 will be met by other means.
- b. Additional requirements for stationary general purpose x-ray systems. In addition to the requirements of subdivision a, all stationary x-ray systems both certified and noncertified shall meet the following requirements:
 - (1) Means shall be provided to indicate when the axis of the x-ray beam is perpendicular to the plane of the image receptor, to align the center of the x-ray field with respect to the center of the image receptor to within two percent of the source-image receptor distance, and to indicate the source-image receptor distance to within two percent.
 - (2) The beam-limiting device shall numerically indicate the field size in the plane of the image receptor to which it is adjusted.
 - (3) Indication of field size dimensions and source-image receptor distances shall be specified in inches or centimeters, and shall be such that aperture adjustments result in x-ray field dimensions in the plane of the image receptor which correspond to those indicated by the beam-limiting device to within two percent of the source-image receptor distance when the beam axis is indicated to be perpendicular to the plane of the image receptor.
- c. X-ray systems designed for one image receptor size. Radiographic equipment designed for only one image receptor size at the fixed source-image receptor distance shall be provided with means to limit the field at the plane of the image receptor to dimensions no greater than those of the image receptor, and to align the center of the x-ray field with the center of the image receptor to within two percent of the source-image receptor distance, or shall be provided with means to both size and align the x-ray field such that the x-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor.
- d. Systems designed for or provided with special attachments for mammography. Radiographic systems designed only for mammography shall be provided with means to limit the useful beam such that the x-ray field at the plane of the image

receptor does not extend beyond any edge of the image receptor at any designated source-image receptor distance except the edge of the image receptor designed to be adjacent to the chest wall where the x-ray field may not extend beyond this edge by more than two percent of the source-image receptor distance. This requirement can be met with a system which performs as prescribed in paragraph 3 of subdivision e. When the beam-limiting device and image receptor support device are designed to be used to immobilize the breast during a mammographic procedure and the source-image receptor distance may vary, the source-image receptor distance indication specified in subparagraphs a and b of paragraph 3 of subdivision e shall be the maximum source-image receptor distance for which beam-limiting device or aperture is designed. In addition, each image receptor support intended for installation on a system designed only for mammography shall have clear and permanent markings to indicate the maximum image receptor size for which it is designed.

e. X-ray systems other than those described in subdivisions a, b, c, and d and veterinary systems installed prior to January 1, 1998, and all portable veterinary x-ray systems.

(1) Means shall be provided to limit the x-ray field in the plane of the image receptor so that such field does not exceed each dimension of the image receptor by more than two percent of the source-image receptor distance when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(2) Means shall be provided to align the center of the x-ray field with the center of the image receptor to within two percent of the source-image receptor distance, or means shall be provided to both size and align the x-ray field such that the x-ray field at the plane of the image receptor does not extend beyond any edge of the image receptor. Compliance shall be determined with the axis of the x-ray beam perpendicular to the plane of the image receptor.

(3) Paragraphs 1 and 2 may be met with a system that meets the requirements for a general purpose x-ray system as specified in subsection 1, or, when alignment means are also provided, may be met with either:

(a) An assortment of removable, fixed-aperture, beam-limiting devices sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed with each such device having clear and permanent markings to indicate the image receptor size and source-image receptor distance for which it is designed; or

(b) A beam-limiting device having multiple fixed apertures sufficient to meet the requirement for each combination of image receptor size and source-image receptor distance for which the unit is designed. Permanent, clearly legible markings shall indicate the image receptor size and source-image receptor distance for which each aperture is designed and shall indicate which aperture is in position for use.

2. **Beam limitation requirements applicable to certified systems only.** Diagnostic x-ray systems incorporating one or more certified components shall be required to comply with the following additional requirements which relate to those certified components.

a. **Beam limitation for stationary and mobile general purpose x-ray systems.**

(1) There shall be provided a means of independent length and width stepless adjustment of the size of the x-ray field. The minimum field size at a source-image receptor distance of one hundred centimeters shall be equal to or less than five centimeters by five centimeters.

(2) When a light localizer is used to define the x-ray field, it shall provide an average illumination of not less than one hundred sixty lux or fifteen foot-candles at one hundred centimeters or at the maximum source-image receptor distance, whichever is less. The average illumination shall be based upon measurements made in the approximate center of each quadrant of the light field.

(3) The edge of the light field at one hundred centimeters or at the maximum source-image receptor distance, whichever is less, shall have a contrast ratio, corrected for ambient lighting, of not less than four in the case of beam-limiting devices designed for use on stationary equipment, and a contrast ratio of not less than three in the case of beam-limiting devices designed for use on mobile equipment. The contrast ratio is defined as I_1/I_2 where I_1 is the illumination three millimeters from the edge of the light field toward the center of field; and I_2 is the illumination three millimeters from the edge of the light field away from the center of the field. Compliance shall be determined with a measuring instrument aperture of one millimeter in diameter.

b. **Beam limitation for portable x-ray systems.** Beam limitation for portable x-ray systems shall meet the beam limitation requirements of subdivision a of subsection 1 and subdivision a of this subsection.

c. **Beam limitation and alignment on stationary general purpose x-ray systems equipped with positive beam limitation (PBL).** The useful beam shall be limited to the area of clinical interest. This shall be deemed to have been met if a positive beam-limiting device meeting manufacturer's specifications and the requirements of this subdivision have been properly used.

(1) Positive beam limitation (PBL), when provided, shall function as described in paragraph 2 whenever all of the following conditions are met:

(a) The image receptor is inserted into a permanently mounted cassette holder.

(b) The image receptor length and width are each less than fifty centimeters.

(c) The x-ray beam axis is within plus or minus three degrees of vertical and the source-image receptor distance is ninety centimeters to one hundred thirty centimeters inclusive, or the x-ray beam axis is within plus or minus

three degrees of horizontal and the source-image receptor distance is ninety centimeters to two hundred five centimeters inclusive.

(d) The x-ray beam axis is perpendicular to the plane of the image receptor to within plus or minus three degrees.

(e) Neither tomographic nor stereoscopic radiography is being performed.

(f) The positive beam limitation system has not been intentionally overridden. The override provision is subject to paragraph 3.

(2) Positive beam limitation (PBL), when provided, shall prevent the production of x-rays when:

(a) Either the length or width of the x-ray field in the plane of the image receptor differs, except as permitted by paragraph 5, from the corresponding image receptor dimensions by more than three percent of the source-image receptor distance.

(b) The sum of the length and width differences as stated in subparagraph a, without regard to sign, exceeds four percent of the source-image receptor distance.

(c) The beam-limiting device is at a source-image receptor distance for which positive beam limitation (PBL) is not designed for sizing.

(3) If a means of overriding the positive beam limitation (PBL) system exists, that method:

(a) If located in a position that the operator would consider it part of the operational controls or if it is referenced in the operator's manual or in other materials intended for the operator.

[1] Must require that a key be utilized to defeat the positive beam limitation;

[2] Must require that the key remain in place during the entire time the positive beam limitation system is overridden; and

[3] Must require that the key or key switch be clearly and durably labeled as follows:

FOR X-RAY FIELD LIMITATION
SYSTEM FAILURE

(b) Must include a label visible to the operator that override of the positive beam limitation system is engaged.

(4) Compliance with paragraph 2 must be determined when the requirements of paragraph 1 are met. Compliance must be determined no sooner than five seconds after insertion of the image receptor.

(5) The positive beam limitation system must be capable of operation, at the discretion of the operator, such that the size of the field may be made smaller than the size of the image receptor through stepless adjustment of the field size. The minimum field size at the source-image receptor distance of one hundred centimeters must be equal to or less than five centimeters by five centimeters.

(6) The positive beam limitation system must be designed such that if a change in image receptor does not cause an automatic return to positive beam limitation function as described in paragraph 2, then any change of image receptor size or source-image receptor distance must cause the automatic return.

3. Radiation exposure control.

a. Exposure initiation. Means shall be provided to initiate the radiation exposure by a deliberate action on the part of the operator, such as the depression of a switch. Radiation exposure shall not be initiated without such an action. In addition, it shall not be possible to initiate an exposure when the timer is set to a "zero" or "off" position if either position is provided.

b. Exposure indication. Means shall be provided for visual indication observable at or from the operator's protected position whenever x-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated.

c. Exposure termination. Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor. Except for dental panoramic systems, termination of an exposure shall cause automatic resetting of the timer to its initial setting or to "zero". It shall not be possible to make an exposure when the timer is set to a zero or off position if either position is provided.

(1) Manual exposure control. An x-ray control which shall be the equivalent of a dead-man switch shall be incorporated into each x-ray system such that an exposure can be terminated by the operator at any time except for:

(a) Exposure of one-half second or less; or

(b) During serial radiography when means shall be provided to permit completion of any single exposure of the series in process.

(2) Automatic exposure controls. When an automatic exposure control is provided:

(a) Indication shall be made on the control panel when this mode of operation is selected;

(b) If the x-ray tube potential is equal to or greater than fifty kVp, the minimum exposure time for field emission equipment rated for pulsed

operation shall be equal to or less than a time interval equivalent to two pulses;

(c) The minimum exposure time for all equipment other than that specified in subparagraph b shall be equal to or less than one-sixtieth second or a time interval required to deliver five mAs, whichever is greater;

(d) Either the product of peak x-ray tube potential, current, and exposure time shall be limited to not more than sixty kW per exposure, or the product of x-ray tube current and exposure time shall be limited to not more than six hundred mAs per exposure except that, when the x-ray tube potential is less than fifty kVp, the product of x-ray tube current and exposure time shall be limited to not more than two thousand mAs per exposure; and

(e) A visible signal shall indicate when an exposure has been terminated at the limits required by subparagraph d, and manual resetting shall be required before further automatically timed exposures can be made.

d. Exposure duration (timer) linearity. For systems having independent selection of exposure time settings, the average ratios $[X_1]$ of exposure to the indicated timer setting, in units of coulombs per kilogram per second [milliroentgen per second], obtained at any two clinically used timer settings shall not differ by more than ten-hundredths times their sum. This is written as:

$$(X_1 - X_2) < 0.1 (X_1 + X_2)$$

where X_1 and X_2 are the average $C\ kg^{-1}s^{-1}$ (mR/s) values.

e. Exposure control location. The x-ray exposure control shall be so placed that the operator can view the patient while making exposures (see appendix B).

f. Operator protection, except veterinary systems.

(1) Stationary systems. Stationary x-ray systems shall be required to have the x-ray control permanently mounted in a protected area so that the operator is required to remain in that protected area during the entire exposure (see appendix B).

(2) Mobile and portable systems. Mobile and portable x-ray systems which are:

(a) Used continuously for greater than one week in the same location, i.e., a room or suite, shall meet the requirements of paragraph 1; and

(b) Used for less than one week at the same location shall be provided with either a protective barrier at least two meters [6.5 feet] high for operator protection during exposures, or means shall be provided to allow the operator to be at least two and seven-tenths meters [9 feet] from the tube housing assembly during the exposure.

(3) Mammography systems shall be operable from a shielded position.

g. Operator protection for veterinary systems. All stationary, mobile, or portable x-ray systems used for veterinary work shall be provided with either a two-meter [6.5-foot] high protection barrier for operator protection during exposures, or shall be provided with means to allow the operator to be at least two and seven-tenths meters [9 feet] from the tube housing assembly during exposures.

4. **Source-to-skin distance.** All mobile or portable radiographic systems shall be provided with means to limit the source-to-skin distance equal to or greater than thirty centimeters, except for veterinary systems.

5. **Radiation exposure reproducibility.** When all technique factors are held constant, including control panel selections associated with automatic exposure control systems, the coefficient of variation of exposure for both manual and automatic exposure control systems shall not exceed five hundredths. This requirement applies to clinically used techniques. This requirement shall be deemed to have been met if, when four radiation exposures are made at identical technique factors, the value of the average radiation exposure (E) is greater than or equal to five times the maximum radiation exposure (E_{max}) minus the minimum radiation exposure (E_{min}),

$$E > 5(E_{\max} - E_{\min})$$

6. **Radiation from capacitor energy storage equipment in standby status.** Radiation emitted from the x-ray tube when the system is fully charged and the exposure switch or timer is not activated shall not exceed a rate of two milliroentgens per hour at five centimeters from any accessible surface of the diagnostic source assembly, with the beam-limiting device fully open.

7. **Accuracy.** Deviation of measured technique factors from indicated values of kVp and exposure time shall not exceed the limits specified for that system by its manufacturer. In the absence of manufacturer's specifications, the deviation shall not exceed ten percent of the indicated value for kVp and twenty percent for time.

8. **mA/mAs linearity.** The following requirements apply when the equipment is operated on a power supply as specified by the manufacturer for any fixed x-ray tube potential within the range of forty percent to one hundred percent of the maximum rated:

a. Equipment having independent selection of x-ray tube current (mA). The average ratios (X₁) of exposure to the indicated milliampere-seconds product in units of coulombs per kilogram per milliampere second (or milliroentgen per milliampere seconds) obtained at any two consecutive tube current settings shall not differ by more than ten hundredths times their sum:

$$X_1 - X_2 \leq 0.10 (X_1 + X_2)$$

where X₁ and X₂ are the average values obtained at each of two consecutive tube current settings, or at two settings differing by no more than a factor of two where the tube current selection is continuous.

b. Equipment having a combined x-ray tube current-exposure time product (mAs) selector, but not a separate tube current (mA) selector. The average ratio (X₁) of exposure to the indicated milliampere-seconds product, in units of coulombs per

kilogram per milliamper second (or milliroentgen per milliamper seconds), obtained at any two consecutive mAs selector settings shall not differ by more than ten hundredths times their sum:

$$X_1 - X_2 < 0.10 (X_1 + X_2)$$

where X_1 and X_2 are the average values obtained at any two consecutive mAs selector settings, or at two settings differing by no more than a factor of two where the mAs selector provided continuous selection.

- c. Measuring compliance. Determination of compliance shall be based on four exposures taken within a time period of one hour, at each of the two settings. These two settings may include any two focal spot sizes except where one is equal to or less than forty-five hundredths millimeters and the other is greater than forty-five hundredths millimeters. For purposes of this requirement, focal spot size is the nominal focal spot size specified by the x-ray tube manufacturer.

9. Other requirements:

- a. Transmission limit for image receptor supporting devices used for mammography. For x-ray systems manufactured after September 5, 1978, which are designed only for mammography, the transmission of the primary beams through the image receptor support provided with the system will be limited such that the exposure five centimeters from any accessible surface beyond the plane of the image receptor supporting device does not exceed twenty-five and eight-tenths microcoulomb per kilogram [.01 milliroentgen] for each activation of the tube. Exposure shall be measured with the system operated at the minimum source-image receptor distance for which it is designed. Compliance shall be determined at the maximum rated peak tube potential for the system and at the maximum rated product of tube current and exposure time (milliamper second) for that peak tube potential. Compliance shall be determined by measurements averaged over an area of one hundred square centimeters with no linear dimension greater than twenty centimeters.
- b. Tube stands for portable x-ray systems. A tube stand or other mechanical support shall be used for portable x-ray systems, so that the x-ray tube housing assembly need not be handheld during exposures.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-02-03, 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, §§ 17, 18

33.1-10-06-07. Intraoral dental radiographic systems.

In addition to the requirements of sections 33.1-10-06-03 and 33.1-10-06-04, the requirements of this section apply to x-ray equipment and associated facilities used for dental radiography. Criteria for extraoral dental radiographic systems are covered in section 33.1-10-06-06. Only systems meeting the requirements of this section shall be used.

1. **Source-to-skin distance.** X-ray systems designed for use with an intraoral image receptor shall be provided with means to limit source-to-skin distance to not less than:

a. Eighteen centimeters if operable above fifty kilovolts peak.

b. Ten centimeters if operable at fifty kilovolts peak only.

2. **Beam limitation.** Radiographic systems designed for use with an intraoral image receptor shall be provided with means to limit the x-ray beam such that:

a. The x-ray beam, at the minimum source-to-skin distance, shall be containable in a circle having a diameter of no more than seven centimeters.

b. An open-ended shielded position indicating device shall be used. The shielding shall be equivalent to the requirements of subsection 4 of section 33.1-10-06-04.

3. **Radiation exposure control.**

a. Exposure initiation.

(1) Means shall be provided to initiate the radiation exposure by a deliberate action on the part of the operator, such as the depression of a switch. Radiation exposure shall not be initiated without such an action.

(2) It shall not be possible to make an exposure when the timer is set to a "zero" or "off" position if either position is provided.

b. Exposure indication. Means shall be provided for visual indication observable at or from the operator's protected position whenever x-rays are produced. In addition, a signal audible to the operator shall indicate that the exposure has terminated.

c. Exposure termination.

(1) Means shall be provided to terminate the exposure at a preset time interval, preset product of current and time, a preset number of pulses, or a preset radiation exposure to the image receptor.

(2) An x-ray exposure control shall be incorporated into each x-ray system such that an exposure can be terminated by the operator at any time, except for exposures of one-half second or less.

(3) Termination of an exposure shall cause automatic resetting of the timer to its initial setting or to "zero".

d. Exposure duration (timer) linearity. For systems having independent selection of exposure time settings, the average ratios (X_1) of exposure to the indicated timer setting, in units of coulombs per kilogram per second [milliroentgen per second], obtained at any two clinically used timer settings shall not differ by more than ten hundredths times their sum.

$$\underline{(X_1 - X_2) < 0.1 (X_1 + X_2)}$$

where X_1 and X_2 are the average values.

e. Exposure control location and operator protection.

(1) Stationary x-ray systems shall be required to have the x-ray exposure control permanently mounted in a protected area, so that the operator is required to remain in that protected area during the entire exposure and so the operator can view the patient while making the exposure.

(2) Mobile and portable x-ray systems which are:

(a) Used for greater than one week in the same location, i.e., a room or suite, shall meet the requirements of paragraph 1.

(b) Used for less than one week in the same location shall be provided with either a protective barrier at least two meters [6.5 feet] high for operator protection, or means to allow the operator to be at least two and seven-tenths meters [9 feet] from the tube housing assembly while making exposures.

(3) Hand-held dental x-ray equipment:

(a) Operators shall use all safety devices and follow safety procedures according to the manufacturer.

(b) Operators shall wear a protective apron during exposure in accordance with subparagraph b of paragraph 6 of subdivision a of subsection 1.

(c) Operators shall have dose monitoring in accordance with section 33.1-10-04.2-01 [10 CFR 20.1502].

4. **Reproducibility.** When the equipment is operated on an adequate power supply as specified by the manufacturer, the estimated coefficient of variation of radiation exposures shall be no greater than five hundredths for any specific combination of selected technique factors.

5. **mA/mAs linearity.** The following requirements apply when the equipment is operated on a power supply as specified by the manufacturer for any fixed x-ray tube potential within the range of forty percent to one hundred percent of the maximum rated.

a. Equipment having independent selection of x-ray tube current (mA). The average ratios (X_1) of exposure to the indicated milliampere-seconds product, in units of coulombs per kilogram per milliamper second (or milliroentgen per milliamper seconds), obtained at any two consecutive tube current settings shall not differ by more than ten hundredths times their sum:

$$\underline{X_1 - X_2 < 0.10 (X_1 + X_2)}$$

where X_1 and X_2 are the average values obtained at any two consecutive tube current settings, or at two settings differing by no more than a factor of two where the tube current selection is continuous.

b. Equipment having a combined x-ray tube current-exposure time product (mAs) selector, but not a separate tube current (mA) selector. The average ratios (X_1) of exposure to the indicated milliampere-seconds product, in units of coulombs per

kilogram per milliamperere second (or mR/mAs), obtained at any two consecutive mAs selector settings shall not differ by more than ten hundredths times their sum:

$$\underline{X_1 - X_2 < 0.10 (X_1 + X_2)}$$

where X_1 and X_2 are the average values obtained by any two mAs selector settings, or at two settings differing by no more than a factor of two where the mAs selector provides continuous selection.

c. Measuring compliance. Determination of compliance shall be based on ten exposures taken within a time period of one hour, at each of the two settings. These two settings may include any two focal spot sizes except where one is equal to or less than forty-five hundredths millimeters and the other is greater than forty-five hundredths millimeters. For purposes of this requirement, focal spot size is the nominal focal spot size specified by the x-ray tube manufacturer.

6. **Accuracy.** Deviation of technique factors from values for kVp and exposure time (if time is independently selectable) shall not exceed the limits specified for that system by its manufacturer. In the absence of manufacturer's specifications, the deviation shall not exceed ten percent of the indicated value for kVp and twenty percent for time.

7. **kVp limitations.** Dental x-ray machines with a nominal fixed kVp of less than fifty kVp shall not be used to make diagnostic dental radiographs of humans.

8. **Beam quality.** All dental x-ray systems are subject to the filtration requirements of subdivision a of subsection 5 of section 33.1-10-06-04.

9. **Administrative controls.**

a. Patient and film holding devices shall be used when the techniques permit.

b. The tube housing and the position indicating device shall not be handheld during an exposure unless the system was specifically designed as a hand-held dental x-ray machine.

c. The x-ray system shall be operated in such a manner that the useful beam at the patient's skin does not exceed the requirements of subdivision a of subsection 2.

d. Dental fluoroscopy without image intensification shall not be used.

e. Security for portable dental systems. A means shall be provided to prevent unauthorized use whenever the x-ray system is not under the control and constant surveillance of the registrant or an authorized operator.

10. **Structural shielding requirements** (see appendix C).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-08. [Reserved]

33.1-10-06-09. [Reserved]

33.1-10-06-10. [Reserved]

33.1-10-06-11. Computed tomography x-ray systems.

1. **Definitions.** In addition to the definitions provided in sections 33.1-10-01-04 and 33.1-10-06-02, the following definitions are applicable to this section:

- a. "Computed tomography dose index" means the integral from -7T to +7T of the dose profile along a line perpendicular to the tomographic plane divided by the product of the nominal tomographic section thickness and the number of tomograms produced in a single scan, that is:

$$CTDI = \frac{1}{nT} \int_{-7T}^{+7T} D(z) dz$$

where:

z = Position along a line perpendicular to the tomographic plane.

D(z) = Dose at position z.

T = Nominal tomographic section thickness.

n = Number of tomograms produced in a single scan.

This definition assumes that the dose profile is centered around z=0 and that, for a multiple tomogram system, the scan increment between adjacent scans is nT.

- b. "Contrast scale" means the change in the linear attenuation coefficient per computed tomography number relative to water, that is:

$$CS = \frac{\mu_x - \mu_w}{(CTN)_x - (CTN)_w}$$

where:

μ_x = Linear attenuation coefficient of the material of interest.

μ_w = Linear attenuation coefficient of water.

$(CTN)_x$ = CTN of the material of interest.

$(CTN)_w$ = CTN of water.

c. "CS" (see "Contrast scale").

d. "CT" means a radiologic imaging technique that produces images of "slices" through a patient's body.

e. "CT conditions of operation" means all selectable parameters governing the operation of a CT x-ray system including, but not limited to, nominal tomographic section thickness, filtration, and the technique factors as defined in section 33.1-10-06-02.

f. "CTDI" (see "Computed tomography dose index").

g. "CT gantry" means the tube housing assemblies, beam-limiting devices, detectors, and the supporting structures and frames which hold these components.

h. "CTN" (see "CT number").

i. "CT number" means the number used to represent the x-ray attenuation associated with each elemental area of the CT image.

$$CTN = \frac{k(\mu_x - \mu_w)}{\mu_w}$$

where:

k = A constant (The constant has a normal value of one thousand when the Hounsfield scale of CTN is used.)

μ_x = Linear attenuation coefficient of the material of interest.

μ_w = Linear attenuation coefficient of water.

j. "Dose profile" means the dose as a function of position along a line.

k. "Elemental area" means the smallest area within a tomogram for which the x-ray attenuation properties of a body are depicted. (see also "Picture element").

- l. "Multiple tomogram system" means a computed tomography x-ray system which obtains x-ray transmission data simultaneously during a single scan to produce more than one tomogram.
- m. "Noise" means the standard deviation of the fluctuations in computed tomography number expressed as a percentage of the attenuation coefficient of water. Its estimate (S_n) is calculated using the following expression:

$$S_n = \frac{100 \times CS \times s}{\mu_w}$$

where:

CS = Contrast scale.

μ_w = Linear attenuation coefficient of water.

s = Estimated standard deviation of the CTN of picture elements in a specified area of the CT image.

- n. "Nominal tomographic section thickness" means the full width at half-maximum of the sensitivity profile taken at the center of the cross-sectional volume over which x-ray transmission data are collected.
- o. "Picture element" means an elemental area of a tomogram.
- p. "Reference plane" means a plane which is displaced from and parallel to the tomographic plane.
- q. "Scan" means the complete process of collecting x-ray transmission data for the production of a tomogram. Data can be collected simultaneously during a single scan for the production of one or more tomograms.
- r. "Scan increment" means the amount of relative displacement of the patient with respect to the CT x-ray system between successive scans measured along the direction of such displacement.
- s. "Scan sequence" means a preselected set of two or more scans performed consecutively under preselected CT conditions of operation.
- t. "Scan time" means the period of time between the beginning and end of x-ray transmission data accumulation for a single scan.
- u. "Single tomogram system" means a CT x-ray system which obtains x-ray transmission data during a scan to produce a single tomogram.

v. "Tomographic plane" means that geometric plane which is identified as corresponding to the output tomogram.

w. "Tomographic section" means the volume of an object whose x-ray attenuation properties are imaged in a tomogram.

2. Requirements for equipment.

a. Termination of exposure.

(1) Means must be provided to terminate the x-ray exposure automatically by either deenergizing the x-ray source or shuttering the x-ray beam in the event of equipment failure affecting data collection. Such termination must occur within an interval that limits the total scan time to no more than one hundred ten percent of its preset value through the use of either a backup timer or devices which monitor equipment function.

(2) A visible signal must indicate when the x-ray exposure has been terminated through the means required by paragraph 1.

(3) The operator must be able to terminate the x-ray exposure at any time during a scan, or series of scans under computed tomography x-ray system control, of greater than one-half second duration.

b. Tomographic plane indication and alignment.

(1) For any single tomogram system, means must be provided to permit visual determination of the tomographic plane or a reference plane offset from the tomographic plane.

(2) For any multiple tomogram system, means shall be provided to permit visual determination of the location of a reference plane. This reference plane can be offset from the location of the tomographic planes.

(3) If a device using a light source is used to satisfy paragraph 1 or 2, the light source must provide illumination levels sufficient to permit visual determination of the location of the tomographic plane or reference plane under ambient light conditions of up to five hundred lux.

c. Beam-on and shutter status indicators and control switches.

(1) The computed tomography x-ray control and gantry must provide visual indication whenever x-rays are produced and, if applicable, whether the shutter is open or closed.

(2) Each emergency button or switch must be clearly labeled as to its function.

d. Indication of computed tomography conditions of operation. The computed tomography x-ray system must be designed such that the computed tomography conditions of operation to be used during a scan or a scan sequence must be indicated prior to the initiation of a scan or a scan sequence. On equipment having

all or some of these conditions of operation at fixed values, this requirement may be met by permanent markings. Indication of computed tomography conditions of operation must be visible from any position from which scan initiation is possible.

e. Extraneous radiation. When data are not being collected for image production, the radiation adjacent to the tube port may not exceed that permitted by subsection 3 of section 33.1-10-06-04.

f. Maximum surface computed tomography dose index identification. The angular position where the maximum surface computed tomography dose index occurs must be identified to allow for reproducible positioning of a computed tomography dosimetry phantom.

g. Additional requirements applicable to computed tomography x-ray systems containing a gantry manufactured after September 3, 1985.

(1) The total error in the indicated location of the tomographic plane or reference plane may not exceed five millimeters.

(2) If the x-ray production period is less than one-half second, the indication of x-ray production must be actuated for at least one-half second. Indicators at or near the gantry must be discernible from any point external to the patient opening where insertion of any part of the human body into the primary beam is possible.

(3) The deviation of indicated scan increment versus actual increment may not exceed plus or minus one millimeter with any mass from zero to one hundred kilograms resting on the support device. The patient support device must be incremented from a typical starting position to the maximum incremented distance or thirty centimeters, whichever is less, and then returned to the starting position. Measurement of actual versus indicated scan increment may be taken anywhere along this travel.

(4) Premature termination of the x-ray exposure by the operator shall necessitate resetting of the computed tomography conditions of operation prior to the initiation of another scan.

h. Facility design requirements.

(1) All CT capable systems shall be required to have the x-ray control permanently mounted in a protected area during the entire exposure (see appendix B).

(2) Aural communication. Provision must be made for two-way aural communication between the patient and the operator at the control panel.

i. Surveys, calibrations, spot checks, and operating procedures.

(1) Surveys.

(a) All computed tomography x-ray systems installed after March 1, 1992, and those systems not previously surveyed shall have a survey made by, or under the direction of, a qualified expert. In addition, such surveys must be done after any change in the facility or equipment which might cause a significant increase in radiation hazard.

(b) The registrant shall obtain a written report of the survey from the qualified expert, and a copy of the report must be made available to the department upon request.

(2) Radiation calibrations.

(a) The calibration of the radiation output of the computed tomography x-ray system must be performed by, or under the direction of, a qualified expert who is physically present at the facility during such calibration.

(b) The calibration of a computed tomography x-ray system must be performed at intervals specified by a qualified expert and after any change or replacement of components which, in the opinion of the qualified expert, could cause a change in the radiation output.

(c) The calibration of the radiation output of a computed tomography x-ray system must be performed with a calibrated dosimetry system. The calibration of such system must be traceable to a national standard. The dosimetry system must have been calibrated within the preceding two years.

(d) Computed tomography dosimetry phantoms must be used in determining the radiation output of a computed tomography x-ray system. Such phantoms must meet the following specifications and conditions of use:

[1] Computed tomography dosimetry phantoms must be right circular cylinders of polymethyl methacrylate of density one point nineteen plus or minus point zero one grams per cubic centimeter. The phantoms must be at least fourteen centimeters in length and must have diameters of thirty-two centimeters for testing computed tomography x-ray systems designed to image any section of the body and sixteen centimeters for systems designed to image the head or for whole body scanners operated in the head scanning mode.

[2] Computed tomography dosimetry phantoms must provide means for the placement of a dosimeter along the axis of rotation and along a line parallel to the axis of rotation one centimeter from the outer surface and within the phantom. Means for the placement of dosimeters or alignment devices at other locations may be provided.

[3] Any effects on the doses measured due to the removal of phantom material to accommodate dosimeters must be accounted for

through appropriate corrections to the reported data or included in the statement of maximum deviation for the values obtained using the phantom.

[4] All dose measurements must be performed with the computed tomography dosimetry phantom placed on the patient couch or support device without additional attenuation materials present.

(e) The calibration shall be required for each type of head, body, or whole-body scan performed at the facility.

(f) Calibration must meet the following requirements:

[1] The dose profile along the center axis of the computed tomography dosimetry phantom for the minimum, maximum, and midrange values of the nominal tomographic section thickness used by the registrant shall be measurable. Where less than three nominal tomographic thicknesses can be selected, the dose profile determination must be performed for each available nominal tomographic section thickness.

[2] The computed tomography dose index (For the purpose of determining the computed tomography dose index, the manufacturer's statement as to the nominal tomographic section thickness for that particular system may be utilized.) along the two axes specified in item 2 of subparagraph d must be measured. The computed tomography dosimetry phantom must be oriented so that the measurement point one centimeter from the outer surface and within the phantom is in the same angular position within the gantry as the point of maximum surface computed tomography dose index identified. The computed tomography conditions of operation must correspond to typical values used by the registrant.

[3] The spot checks specified in paragraph 3 of subdivision i must be made.

(g) Calibration procedures must be in writing. Records of calibrations performed must be maintained for inspection by the department.

(3) Spot checks.

(a) The spot check procedures must be in writing and must have been developed by a qualified expert.

(b) The spot check procedures must incorporate the use of a computed tomography dosimetry phantom which has a capability of providing an indication of contrast scale, noise, nominal tomographic section thickness, the resolution capability of the system for low and high contrast objects, and measuring the mean computed tomography number for water or other reference material.

(c) All spot checks must be included in the calibration required by paragraph 2 and at time intervals and under system conditions specified by a qualified expert.

(d) Spot checks must include acquisition of images obtained with the computed tomography dosimetry phantoms using the same processing mode and computed tomography conditions of operation as are used to perform calibrations required by paragraph 2 of subdivision i. The images must be retained, until a new calibration is performed, in two forms as follows:

[1] Photographic copies of the images obtained from the image display device; and

[2] Images stored in digital form on a storage medium compatible with the computed tomography x-ray system.

(e) Written records of the spot checks performed shall be maintained for inspection by the department.

(4) Operating procedures.

(a) The computed tomography x-ray system may not be operated except by an individual who has been specifically trained in its operation.

(b) Information must be available at the control panel regarding the operation and calibration of the system. Such information must include the following:

[1] Dates of the latest calibration and spot checks and the location within the facility where the results of those tests may be obtained;

[2] Instructions on the use of the computed tomography dosimetry phantoms including a schedule of spot checks appropriate for the system, allowable variations for the indicated parameters, and the results of at least the most recent spot checks conducted on the system;

[3] The distance in millimeters between the tomographic plane and the reference plane if a reference plane is utilized; and

[4] A current technique chart available at the control panel which specifies for each routine examination the computed tomography conditions of operation and the number of scans per examination.

(c) If the calibration or spot check of the computed tomography x-ray system identifies that a system operating parameter has exceeded a tolerance established by the qualified expert, use of the computed tomography x-ray system on patients must be limited to those uses permitted by established written instructions of the qualified expert.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-06-12. Bone densitometry.

1. Bone densitometry systems shall be:

a. Certified by the manufacturer pursuant to the Medical Device Act and subchapter C - electronic product radiation control (EPRC) of chapter V of the Federal Food, Drug and Cosmetic Act;

b. Registered in accordance with chapter 33.1-10-02 of these regulations; and

c. Maintained and operated in accordance with the manufacturer's specifications.

2. Equipment requirements. Systems with stepless collimators shall be provided with means to both size and align the x-ray field such that the x-ray field at the plane of the image receptor does not extend beyond two percent of the source-image receptor distance.

3. Operators of bone densitometry systems shall: Complete a training course on the bone densitometry which is acceptable to the department. The training course shall include:

a. Basic radiation protection;

b. Operating procedures for bone densitometry systems, to include use of various system functions, safety, and maintenance; and

c. Patient positioning for the type of examinations performed.

4. During the operation of any bone densitometry system:

a. The operator, ancillary personnel, and members of the general public shall be positioned as far away as practical but not less than two meters from the patient and bone densitometry system during the examination.

b. The operator shall advise the patient that the bone densitometry examination is a type of x-ray procedure.

5. The registrant shall keep maintenance records for bone densitometry systems as prescribed by subdivision b of subsection 1 of section 33.1-10-06-03. These records shall be maintained for inspection by the department.

6. Bone densitometry on human patients shall be conducted only:

a. Under a prescription of a licensed practitioner of the healing arts; or

b. Under a screening program approved by the department.

7. Any person proposing to conduct a bone densitometry screening program shall submit the information outlined in appendix E.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

APPENDIX A

INFORMATION ON RADIATION SHIELDING REQUIRED FOR PLAN REVIEWS

In order for the department to provide an evaluation, technical advice, and official approval on shielding requirements for a radiation installation, the following information shall be submitted:

1. The plans should show, as a minimum, the following:

a. The normal location of the x-ray system's radiation port; the port's travel and traverse limits; general direction or directions of the useful beam; locations of any windows and doors; the location of the operator's booth; and the location of the x-ray control panel.

b. Structural composition and thickness or lead equivalent of all walls, doors, partitions, floor, and ceiling of the room or rooms concerned.

c. The dimensions of the room or rooms concerned.

d. The type of occupancy of all adjacent areas inclusive of space above and below the room or rooms concerned. If there is an exterior wall, show distance to the closest area or areas where it is likely that individuals may be present.

e. The make and model of the x-ray equipment and the maximum technique factors.

f. The type of examinations or treatments which will be performed with the equipment, e.g., dental, orthodontal, chest, gastrointestinal, fluoroscopic, podiatry, fixed therapy, rotational therapy, etc.

2. Information on the anticipated workload of the x-ray systems.

3. If the services of a qualified expert have been utilized to determine the shielding requirements, a report, including all basic assumptions used, must be submitted with the plans.

History: Effective _____, 2018.

APPENDIX B

MINIMUM DESIGN REQUIREMENTS FOR AN X-RAY MACHINE OPERATOR'S BOOTH

1. Space requirements.

- a. The operator shall be allotted not less than seven and five-tenths square feet [0.697 square meter] of unobstructed floor space in the booth.
- b. The operator's booth may be any geometric configuration with no dimension of less than two feet [0.61 meters].
- c. The space shall be allotted excluding any encumbrance by the console, such as overhang, cables, or other similar encroachments.
- d. The booth must be located or constructed such that unattenuated direct scatter radiation originating on the examination table or at the wall cassette not reach the operator's station in the booth.

2. Structural requirements.

- a. The booth walls shall be permanently fixed barriers of at least seven feet [2.13 meters] high.
- b. When a door or movable panel is used as an integral part of the booth structure, it must have an interlock which will prevent an exposure when the door or panel is not closed.
- c. Shielding must be provided to meet the requirements of chapter 33.1-10-04.2 of these rules.

3. X-ray control placement. The x-ray control for the system shall be fixed within the booth and:

- a. Shall be at least forty inches [1.02 meters] from any open edge of the booth wall which is nearest to the examining table.
- b. Shall allow the operator to use the majority of the available viewing windows.

4. Viewing system requirements.

- a. Each booth shall have at least one viewing device which will:
 - (1) Be so placed that the operator can view the patient during any exposure; and
 - (2) The device shall be so placed that the operator can have full view of any occupant of the room and should be so placed that the operator can view any entry into the room. If any door, which allows access to the room, cannot be seen from the booth, then that door must have an interlock controlling the exposure which will prevent the exposure if the door is not closed.
- b. When the viewing system is a window, the following requirements also apply:

- (1) The viewing area must be at least one square foot [0.0929 square meter].
- (2) The design of the booth must be such that the operator's expected position when viewing the patient and operating the x-ray system is at least eighteen inches [0.457 meter] from the edge of the booth.
- (3) The material constituting the window must have the same lead equivalence as that required in the booth's wall in which it is mounted.
- c. When the viewing system is by mirrors, the mirrors must be so located as to accomplish the general requirements of subdivision a.
- d. When the viewing system is by electronic means:
 - (1) The camera shall be so located as to accomplish the general requirements in subdivision a; and
 - (2) There shall be an alternate viewing system as a backup for the primary system.

History: Effective _____, 2018.

APPENDIX C

STRUCTURAL SHIELDING REQUIREMENTS

1. General requirements.

- a. Each installation must be provided with such primary or secondary barriers as are necessary to assure compliance with section 33.1-10-04.2-01 [10 CFR 20.1201, 20.1207, 20.1208, and 20.1301]. This requirement must be deemed to be met if the thicknesses of such barriers are equivalent to those as computed in accordance with appendices B, C, and D of the National Council on Radiation Protection and Measurements Report No. 49, "Medical X-Ray and Gamma-Ray Protection for Energies Up to 10 MeV," modified to meet current dose limits.
- b. Lead barriers must be mounted in such manner that they will not sag or cold-flow because of their own weight and shall be protected against mechanical damage.
- c. Joints between different kinds of protective materials must be designed so that the overall protection of the barrier is not impaired.
- d. Joints at the floor and ceiling must be so designed that the overall protection is not impaired.
- e. Windows, window frames, doors, and door frames must have the same lead equivalent as that required of the adjacent wall.
- f. Holes in protective barriers must be covered so that overall attenuation is not impaired.

2. Fluoroscopic x-ray systems. Ordinarily only secondary barriers are necessary except combined fluoroscopic-radiographic installations.

3. Radiographic systems other than fluoroscopic, dental intraoral, or veterinarian systems:

- a. All wall, floor, and ceiling areas exposed to the useful beam must have primary barriers. Primary barriers in walls must extend to a minimum height of eighty-four inches [2.13 meters] above the floor.
- b. Secondary barriers must be provided in all wall, floor, and ceiling areas not having primary barriers or where the primary barrier requirements are lower than the secondary requirements.
- c. The operator's station at the control shall be behind a protective barrier, either in a separate room, in a protected booth, or behind a shield which will intercept the useful beam and any radiation which has been scattered only once.
- d. A window of lead equivalent glass equal to that required by the adjacent barrier or a mirror system shall be provided large enough and so placed that the operator can see the patient without having to leave the protected area during exposure.

e. For mobile and portable x-ray systems which are used for greater than one week in one location (one room or suite), the requirements of this appendix shall apply.

4. Intraoral dental radiographic systems.

a. Dental rooms containing x-ray machines shall be provided with primary barriers at all areas struck by the useful beam. Consideration shall be given to the attenuation provided by the patient.

b. When dental x-ray units are installed in adjacent rooms or areas, protective barriers shall be provided between the rooms or areas.

Note: In many cases, structural materials of ordinary walls suffice as a protective barrier without addition of special shielding material.

5. Therapeutic x-ray installations. The structural shielding requirements shall be deemed to be met if the barriers have been designed and constructed in accordance with the National Council on Radiation Protection and Measurements Report No. 49, "Medical X-Ray and Gamma-Ray Protection for Energies Up to 10 MeV", modified to meet current dose limits.

6. Veterinary medicine radiographic installations.

a. All wall, floor, and ceiling areas exposed to the useful beam shall have primary barriers. Primary barriers in walls shall extend to a minimum height of eighty-four inches [2.13 meters] above the floor.

b. Secondary barriers shall be provided in all wall, floor, and ceiling areas not having primary barriers or where the primary barrier requirements are lower than the secondary requirements.

History: Effective _____, 2018.

APPENDIX D
X-RAY FILM DEVELOPING
Time Temperature Chart

<u>Thermometer Readings (Degrees)</u>		<u>Minimum Developing Times (Minutes)</u>
<u>C</u>	<u>F</u>	
<u>27</u>	: <u>80</u>	<u>2</u>
	<u>79</u>	<u>2</u>
	<u>78</u>	<u>2 1/2</u>
	<u>77</u>	<u>2 1/2</u>
<u>24</u>	: <u>76</u>	<u>3</u>
	<u>75</u>	<u>3</u>
	<u>74</u>	<u>3 1/2</u>
	<u>73</u>	<u>3 1/2</u>
<u>22</u>	: <u>72</u>	<u>4</u>
	<u>71</u>	<u>4</u>
	<u>70</u>	<u>4 1/2</u>
	<u>69</u>	<u>4 1/2</u>
<u>20</u>	: <u>68</u>	<u>5</u>
	<u>67</u>	<u>5 1/2</u>
	<u>66</u>	<u>5 1/2</u>
	<u>65</u>	<u>6</u>
<u>18</u>	: <u>64</u>	<u>6 1/2</u>
	<u>63</u>	<u>7</u>
	<u>62</u>	<u>8</u>
	<u>61</u>	<u>8 1/2</u>
<u>16</u>	: <u>60</u>	<u>9 1/2</u>

Processing of Film

1. Manual processing of film.

- a. Where film is developed manually, processing tanks should be made of mechanically rigid, corrosion resistant material and the temperature of solutions in the tanks shall be maintained within the range of sixteen degrees Celsius to twenty-seven degrees Celsius [60-80 degrees Fahrenheit]. Film shall be developed in accordance with the time-temperature relationships recommended by the film

manufacturer, or, in the absence of such recommendations, with the above time-temperature chart.

b. Devices shall be available which will give all of the following:

(1) The actual temperature of the developer.

(2) An audible or visible signal, after a preset time (in minutes of duration).

2. Automatic processors and other closed processing systems.

a. Film shall be developed in accordance with the time-temperature relationships recommended by the film manufacturer.

b. The specified developer temperature and immersion time shall be posted in the darkroom or on the automatic processor.

c. Preventive maintenance shall be performed on the unit, except for extended periods of nonuse, on a frequency basis which is not less than that schedule recommended by the manufacturer. In the event that no schedule is available from the manufacturer a maintenance schedule shall be established which will preserve good film quality.

d. After a full cleansing of the processor a film shall be exposed to a density of approximately one, with one-half of the film protected exposure. It will be developed and then kept near the unit and daily at least one test film (exposed under techniques identical with those used for the original test film) shall be compared with the original test film to evaluate the adequacy of the unit's developing capability and base fog level.

3. Processing deviations from the requirements of appendix D shall be documented by the registrant in such manner that the requirements are shown to be met or exceeded (e.g., extended processing, and special rapid chemistry).

4. Other requirements:

a. Pass boxes, if provided, shall be so constructed as to exclude light from the darkroom when cassettes are placed in or removed from the boxes, and shall incorporate adequate shielding from stray radiation to prevent exposure of undeveloped film.

b. The darkroom shall be light tight and use proper safelighting such that any film type in use exposed in a cassette to x-radiation sufficient to produce an optical density from one to two when processed shall not suffer an increase in density greater than 0.1 (0.05 for mammography) when exposed in the darkroom for two minutes with all safelights on. If used, daylight film handling boxes shall preclude fogging of the film.

c. Darkrooms typically used by more than one individual shall be provided a method to prevent accidental entry while undeveloped films are being handled or processed.

- d. Film shall be stored in a cool, dry place and shall be protected from exposure to stray radiation. Film in open packages shall be stored in a light tight container.
- e. Film cassettes and intensifying screens shall be inspected periodically and shall be cleaned and replaced as necessary to best assure radiographs of good diagnostic quality.
- f. Outdated x-ray film shall not be used for diagnostic radiographs, unless the film has been stored in accordance with the manufacturer's recommendations and a sample of the film passes a sensitometric test for normal ranges of base plus fog and speed.
- g. Film developing solutions shall be prepared in accordance with the directions given by the manufacturer, and shall be maintained in strength by replenishment or renewal so that full development is accomplished within the time specified by the manufacturer.

History: Effective _____, 2018.

APPENDIX E

INFORMATION TO BE SUBMITTED BY PERSONS PROPOSING TO CONDUCT HEALING ARTS SCREENING

Persons requesting that the department approve a healing arts screening program shall submit the following information and evaluation:

1. Name and address of the applicant and, where applicable, the names and addresses of agents within this state.
2. Diseases or conditions for which the x-ray examinations are to be used in diagnoses.
3. A detailed description of the x-ray examinations proposed in the screening program.
4. Description of the population to be examined in the screening program, i.e., age, sex, physical condition, and other appropriate information.
5. An evaluation of any known alternate methods not involving ionizing radiation which could achieve the goals of the screening program and why these methods are not used instead of the x-ray examinations.
6. An evaluation by a qualified expert on the x-ray systems to be used in the screening program. The evaluation by the qualified expert shall show that such systems do satisfy all requirements of this article. The evaluation shall include a measurement of patient exposures from the x-ray examinations to be performed.
7. A description of the diagnostic x-ray quality control program.
8. A copy of the technique chart for the x-ray examination procedures to be used.
9. The qualifications of each individual who will be operating the x-ray systems.
10. The qualifications of the individual who will be supervising the operators of the x-ray systems. The extent of supervision and the method of work performance evaluation shall be specified.
11. The name and address of the individual who will interpret the radiographs.
12. A description of the procedures to be used in advising the individuals screened and their private practitioners of the healing arts of the results of the screening procedure and any further medical needs indicated.
13. A description of the procedures for the retention or disposition of the radiographs and other records pertaining to the x-ray examinations.
14. An indication of the frequency of screening and the duration of the entire screening program.

History: Effective _____, 2018.

APPENDIX F

GENERAL TRAINING REQUIREMENTS FOR ALL X-RAY OPERATORS

The department may use interview, observation and/or testing to determine compliance. The following are areas in which an individual shall have expertise for the competent operation of x-ray equipment:

1. Fundamentals of radiation safety.
 - a. Characteristics of x-radiation.
 - b. Units of radiation dose (mrem).
 - c. Hazards of exposure to radiation.
 - d. Levels of radiation from sources of radiation.
 - e. Methods of controlling radiation dose.
 - (1) Working time.
 - (2) Working distance.
 - (3) Shielding.
 - (4) Collimation.
 - (5) Filtration.
 - (6) Gonad shielding and other patient protection devices.
 - (7) Restriction of x-ray beam to the image receptor.
 - (8) Grid utilization.
 - (9) Utilization of mechanical immobilization device.
2. Familiarization with equipment.
 - a. Identification of controls.
 - b. Function of each control.
 - c. How to use a technique chart.
3. Film processing.
 - a. Film speed as related to patient exposure.
 - b. Film processing parameters.
 - c. Quality assurance program.

4. Emergency procedures. Termination of exposure in event of automatic timing device failure.
5. Proper use of personnel dosimetry.
 - a. Location of dosimeter.
 - b. Interpretation of personnel monitoring reports.
6. Anatomy and positioning.
 - a. Relevant human anatomy.
 - b. Relevant human physiology.
 - c. Radiographic positioning.
7. The requirements of pertinent federal and state rules.
8. The licensee's or registrant's written operating and emergency procedures.

History: Effective _____, 2018.

APPENDIX G

The following are individuals that qualify for training exemptions, approved Allied Health professions which qualify for cross-training into diagnostic x-ray as a limited x-ray machine operator and individuals who may order diagnostic x-rays to be taken by a limited x-ray machine operator outside the scope of procedures in appendix I:

1. Individuals exempt from minimum training requirements in subparagraph b of paragraph 2 of subdivision a of subsection 1 of section 33.1-10-06-03.
 - a. Medical doctors.
 - b. Chiropractors.
 - c. Doctors of osteopathy.
 - d. Podiatrists.
2. Prerequisite qualification: Individuals who qualify for cross-training as a limited x-ray machine operator.
 - a. Nurse practitioner, registered nurse, licensed practical nurse.
 - b. Emergency medical technician paramedic.
 - c. Physical therapist, physical therapy assistant.
 - d. Occupational therapist, occupational therapy assistant.
 - e. Medical technologist, medical lab technician, clinical lab technician.
 - f. Physician assistant.
 - g. Orthopedic physician assistant.
3. Individuals who may order emergency x-ray examinations outside the scope of procedures in appendix I to be taken by limited x-ray machine operators:
 - a. Medical doctor.
 - b. Doctor of osteopathy.
 - c. Physician assistant.
 - d. Nurse practitioner.
 - e. Chiropractor.

History: Effective _____, 2018.

APPENDIX H

Limited X-Ray Machine Operator Training Requirements

Students must meet the prerequisite requirements of item 1 of subparagraph b of paragraph 2 of subdivision a of subsection 1 of section 33.1-10-06-03 and complete the training requirements of this appendix.

Training requirements have been divided into two sections, didactic instruction and clinical experience/supervision. Upon completion of didactic training, the individual must complete the clinical experience requirements of either subdivision a or b of subsection 2 and demonstrate competence for examinations listed in appendix I. Records must be maintained to demonstrate compliance with these requirements.

1. Didactic instruction section: Individuals shall complete a minimum of eighty hours of didactic training at a single course providing the minimum hours of instruction in the subjects below. Correspondence coursework cannot exceed twenty percent of the eighty-hour course (sixteen hours maximum). The course content should approximate the outline below. The eighty-hour course is subject to department approval. Individuals must also complete the three-hour self study course designed by the state department of environmental quality. An examination is required to demonstrate successful completion of a course.

a. Basic X-Ray Physics 12 hrs.

- general description of production of x-rays
- function of filtration and effects it has on x-ray beam
- collimation
- types and function of beam limiting devices
- design, features and function of x-ray tube

b. Radiobiology 1 hr.

- effects of ionizing radiation to the human body
- factors that cause somatic and genetic damage

c. Radiation Protection 6 hrs.

- ALARA concept
- shielding materials
- radiation quantity and units of measurement
- basic interactions of x-ray with matter
- primary and secondary scatter
- importance of time, distance, shielding

- maximum permissible dose-occupational/public
- latency period
- patient protection

d. Principles of Exposure 15 hrs.

- factors that control and influence radiographic quality
- properties of x-rays
- size distortion caused by geometric parameters
- parameters which cause shape distortion
- technique factor selection
- 15% rule, mAs and kVp relationship
- grid-types, ratios, and how they affect image quality
- intensifying screens
- x-ray film
- artifacts
- inverse square law

e. Darkroom Procedure and Processing 4 hrs.

- film storage and handling
- film processing and troubleshooting
- design, features and function of a processor
- silver recovery
- quality assurance/quality control

f. Anatomy and Positioning

- | | |
|---------------------|---------------|
| <u>1. Chest</u> | <u>4 hrs.</u> |
| <u>2. Abdomen</u> | <u>4 hrs.</u> |
| <u>3. Extremity</u> | <u>8 hrs.</u> |
| <u>4. Spine</u> | <u>8 hrs.</u> |
| <u>5. Skull</u> | <u>8 hrs.</u> |

g. Pediatric 2 hrs.

h. Rules and Regulations

1 hr.

2. Clinical experience/supervision section. Individuals must complete either a or b below. If the individual is unable to demonstrate clinical competence in a procedure due to a lack of opportunity, the student shall complete the three prerequisite examinations required by appendix J using simulation for subdivisions a through k of subsection 1 of appendix J. Final demonstration of competence in subdivisions a through s of subsection 1 of appendix J should be completed as soon as there is a patient requiring the procedure. No individual may perform an unsupervised procedure for which they have not successfully completed the final demonstration of competence.

a. The individual must complete three months of clinical training during which time they may perform x-ray examinations only under direct supervision.

(1) Direct supervision and evaluation of competence shall be performed by a general diagnostic operator or a limited x-ray machine operator with two years' experience.

(2) The individual shall utilize proper procedure as indicated in appendix J.

(3) The individual shall be evaluated on procedure, performance and competency on forms provided by the department for each of the examinations listed in appendix I; or

b. Individuals must complete at least one hundred twenty hours of clinical training at a facility where there is routinely fifty or more limited diagnostic x-ray examinations performed per week. During this time they may perform x-ray examinations only under direct supervision. After completing the one hundred twenty hours of training, the individual must complete an additional three-month probationary training period as outlined in number 4 of this part.

(1) Direct supervision and evaluation of competence shall be performed by a general diagnostic operator or a limited x-ray machine operator with a two years' experience.

(2) The individual shall utilize proper procedure as indicated in appendix J.

(3) The individual shall be evaluated on procedure performance and competency on forms provided by the department for each of the examinations listed in appendix I.

(4) Upon completion of one hundred twenty clinical hours and demonstration of competence in accordance with appendix J for limited x-ray machine operator examinations:

(a) Individuals must complete a three-month probationary training period during which time they may independently perform limited x-ray machine operator examinations for the procedures which they have successfully demonstrated competence.

(b) During the three-month probationary training, a general diagnostic operator, or a limited x-ray machine operator with two years' experience, or a radiologist must evaluate all films and conduct at least six hours of direct supervision on a weekly basis and give feedback on any needed improvements.

[1] All films, including repeat and waste films, must be kept for evaluation.

[2] Evaluation must be done on forms supplied by the department.

History: Effective _____, 2018.

APPENDIX I

Specific examinations that are allowed in the scope of practice for limited x-ray machine operators.

<u>Chest:</u>	<u>PA, lateral, decubitus</u>
<u>Ribs:</u>	<u>AP, PA, obliques</u>
<u>Abdomen:</u>	<u>KUB, upright abdomen</u>
<u>Hand & fingers:</u>	<u>PA, lateral, oblique</u>
<u>Wrist:</u>	<u>PA, lateral, oblique</u>
<u>Forearm:</u>	<u>AP, lateral</u>
<u>Elbow:</u>	<u>AP, lateral</u>
<u>Humerus:</u>	<u>AP, lateral</u>
<u>Shoulder:</u>	<u>AP, internal & external rotation, y-view</u>
<u>Clavicle:</u>	<u>AP, AP axial</u>
<u>Pelvis:</u>	<u>AP</u>
<u>Hips:</u>	<u>AP, Frog leg lateral, cross-table lateral</u>
<u>Femur:</u>	<u>AP, lateral</u>
<u>Knee:</u>	<u>AP, lateral, obliques</u>
<u>Patella:</u>	<u>AP, lateral, sunrise</u>
<u>Tibia-Fibula:</u>	<u>AP, lateral</u>
<u>Ankle:</u>	<u>AP, lateral, obliques</u>
<u>Calcaneous:</u>	<u>Plantodorsal, lateral</u>
<u>Foot & toes:</u>	<u>AP, lateral, obliques</u>
<u>Sinuses:</u>	<u>Water's, lateral</u>
<u>Skull:</u>	<u>AP/PA, lateral</u>
<u>Facial bones:</u>	<u>PA, lateral</u>
<u>Nasal bones:</u>	<u>Water's, lateral</u>
<u>C-spine:</u>	<u>AP, lateral, odontoid, (not trauma), swimmer's (not trauma)</u>
<u>T-spine:</u>	<u>AP, lateral, swimmer's (not trauma)</u>
<u>L-spine:</u>	<u>AP, lateral, L5-S1 lateral</u>

Any situation deemed an emergency and requiring a limited x-ray machine operator to conduct procedures not specifically listed above, requires a written order from an individual listed in part 3 of appendix G and direct supervision from the individual ordering the examination in accordance with item 1 of subparagraph c of paragraph 2 of subdivision a of subsection 1 of section 33.1-10-06-03.

History: Effective _____, 2018.

APPENDIX J

X-Ray Procedure and Image Competency Criteria

An individual must perform at least three examinations prior to requesting a final competency evaluation for each of the limited scope examinations listed in appendix I. The three preevaluation examinations should be on actual patients but may be simulated if there is an insufficient number of patients requiring the procedure during the students clinical competency training period. The evaluations shall be documented on forms provided by the department. The final competency evaluation must be on an actual patient. To pass a final competency evaluation, the individual must receive an acceptable rating in each of the criteria listed below.

1. At a minimum, the following criteria must be evaluated during a procedure and image competency evaluation involving an actual patient. Simulated procedures need to evaluate only subdivisions a through k below:

a. Select appropriate film size.

b. Select appropriate technique.

c. Use correct source-to-image distance.

d. Establish proper direction of central ray.

e. Execute proper patient position.

f. Collimate if appropriate.

g. Provide gonadal shielding if appropriate.

h. Use correct film markers.

i. Give proper patient instruction.

j. Place patient information correctly on the film.

k. Complete examination in an acceptable time limit.

l. All anatomical parts included on the film.

m. Correct positioning of anatomical parts.

n. Appropriate contrast.

o. Adequate density.

p. Correct use of right and left markers.

q. Proper accessory markers as needed.

r. No visible motion.

s. Patient information correct and clearly visible.

2. If the individual is unable to demonstrate clinical competence while completing the requirements for clinical supervision in either subdivision a or b of subsection 2 of appendix H due to a lack of opportunities to conduct certain procedures, the student shall complete the three prerequisite examinations using simulation for subdivisions a through k of subsection 1. Final demonstration of competence in subdivisions a through s of subsection 1 should be completed as soon as there is a patient requiring the procedure. No individual may perform an unsupervised procedure for which they have not successfully completed the final demonstration of competence.

History: Effective _____, 2018.

APPENDIX K

Continuing Education Requirements

Continuing education units (CEUs) are required for all limited x-ray machine operators and general diagnostic operators as defined by subparagraphs a and b of paragraph 2 of subdivision a of subsection 1 of section 33.1-10-06-03 of the North Dakota radiological health rules. Continuing education unit requirements will be associated with a two-year cycle (biennium).

1. General diagnostic operators shall obtain a minimum of 24 CEUs per biennium.
2. Limited x-ray machine operators shall obtain a minimum of 12 CEUs per biennium.
3. Units from one biennium cannot be carried forward or applied to the following biennium.
4. Determining the beginning of a biennium.
 - a. For limited x-ray machine operators and general diagnostic operators not certified through an accrediting body, the biennium will begin January 1, 2009.
 - b. For general diagnostic operators certified through an accrediting body, the biennium will be defined by the registration requirements through their accrediting body and shall begin on the first due date following January 1, 2009.
5. Continuing education unit activities must be approved by an accrediting body.

History: Effective _____, 2018.

CHAPTER 33.1-10-07 [RESERVED]

CHAPTER 33.1-10-07.1 [RESERVED]

CHAPTER 33.1-10-07.2 MEDICAL USE OF BYPRODUCT MATERIAL

Section

33.1-10-07.2-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations
Part 35

33.1-10-07.2-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 35.

10 Code of Federal Regulations 35.1, 35.2, 35.5, 35.6, 35.7, 35.10, 35.11, 35.12, 35.13, 35.14, 35.15, 35.18, 35.19, 35.24, 35.26, 35.27, 35.40, 35.41, 35.49, 35.50, 35.51, 35.55, 35.57, 35.59, 35.60, 35.61, 35.63, 35.65, 35.67, 35.69, 35.70, 35.75, 35.80, 35.92, 35.100, 35.190, 35.200, 35.204, 35.290, 35.300, 35.310, 35.315, 35.390, 35.392, 35.394, 35.396, 35.400, 35.404, 35.406, 35.410, 35.415, 35.432, 35.433, 35.457, 35.490, 35.491, 35.500, 35.590, 35.600, 35.604, 35.605, 35.610, 35.615, 35.630, 35.632, 35.633, 35.635, 35.642, 35.643, 35.645, 35.647, 35.652,

35.655, 35.657, 35.690, 35.1000, 35.2024, 35.2026, 35.2040, 35.2041, 35.2060, 35.2061, 35.2063, 35.2067, 35.2070, 35.2075, 35.2080, 35.2092, 35.2204, 35.2310, 35.2404, 35.2406, 35.2432, 35.2433, 35.2605, 35.2610, 35.2630, 35.2632, 35.2642, 35.2643, 35.2645, 35.2647, 35.2652, 35.2655, 35.3045, 35.3047, and 35.3067 are adopted by reference as they exist on January 1, 2010, with the following exceptions:

1. Not adopted by reference are 35.11(c)(1) and 35.13(a)(1).
2. Requirements in 10 Code of Federal Regulations 35 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "NRC regional office", or "director, office of nuclear material safety and safeguards" appear in 10 Code of Federal Regulations part 35, substitute the words "department of environmental quality".
4. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations 34.
6. For references to 10 Code of Federal Regulations parts 170 and 171, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-08

RADIATION SAFETY REQUIREMENTS FOR ANALYTICAL X-RAY EQUIPMENT

Section

33.1-10-08-01 Purpose and Scope

33.1-10-08-02 Definitions

33.1-10-08-03 Equipment Requirements

33.1-10-08-04 Area Requirements

33.1-10-08-05 Operating Requirements

33.1-10-08-06 Personnel Requirements

33.1-10-08-01. Purpose and scope.

This chapter provides special requirements for analytical x-ray equipment. The requirements of this chapter are in addition to, and not in substitution for, applicable requirements in other chapters of this article.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-08-02. Definitions.

As used in this chapter, the following definitions apply:

1. "Analytical x-ray equipment" means equipment used for x-ray diffraction or fluorescence analysis.
2. "Analytical x-ray system" means a group of components utilizing x-rays or gamma rays to determine the elemental composition or to examine the microstructure of materials.
3. "Fail-safe characteristics" means a design feature which causes beam port shutters to close, or otherwise prevents emergence of the primary beam, upon the failure of a safety or warning device.
4. "Local components" means part of an analytical x-ray system and includes areas that are struck by x-rays such as radiation source housings, port and shutter assemblies, collimators, sample holders, cameras, goniometers, detectors and shielding, but do not include power supplies, transformers, amplifiers, readout devices, and control panels.
5. "Normal operating procedures" means step-by-step instructions necessary to accomplish the analysis. These procedures must include sample insertion and manipulation, equipment alignment, routine maintenance by the registrant, and data recording procedures, which are related to radiation safety.
6. "Open-beam configuration" means an analytical x-ray system in which an individual could accidentally place some part of the individual's body in the primary beam path during normal operation.
7. "Primary beam" means ionizing radiation which passes through an aperture of the source housing by a direct path from the x-ray tube or a radioactive source located in the radiation source housing.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-08-03. Equipment requirements.

1. **Safety device.** A device which prevents the entry of any portion of an individual's body into the primary x-ray beam path or which causes the beam to be shut off upon entry into its path shall be provided on all open-beam configurations. A registrant may apply to the department for an exemption from the requirement of a safety device. Such application shall include:
 - a. A description of the various safety devices that have been evaluated.
 - b. The reason each of these devices cannot be used.
 - c. A description of the alternative methods that will be employed to minimize the possibility of an accidental exposure, including procedures to assure that operators and others in the area will be informed of the absence of safety devices.

2. Warning devices.

a. Open-beam configurations shall be provided with a readily discernible indication of:

(1) X-ray tube (ON-OFF) status located near the radiation source housing, if the primary beam is controlled in this manner.

(2) Shutter status (OPEN-CLOSED) located near each port on the radiation source housing, if the primary beam is controlled in this manner.

b. An easily visible warning light labeled with the words "X-RAY ON", or word having a similar intent, must be located:

(1) Near any switch that energizes an x-ray tube and shall be illuminated only when the tube is energized.

(2) In the case of a radioactive source, near any switch that opens a housing shutter and must be illuminated only when the shutter is open.

c. Warning devices shall be labeled so that their purpose is easily identified. On equipment installed after August 1, 1979, warning devices shall have fail-safe characteristics.

3. Ports. Unused ports on radiation source housings shall be secured in the closed position in a manner which will prevent casual opening.

4. Labeling. All analytical x-ray equipment shall be labeled with a readily discernible sign or signs bearing the radiation symbol and the words:

a. "CAUTION - HIGH INTENSITY X-RAY BEAM", or words having a similar intent, on the X-ray source housing; and

b. "CAUTION RADIATION - THIS EQUIPMENT PRODUCES RADIATION WHEN ENERGIZED", or words having a similar intent, near any switch that energizes an x-ray tube if the radiation source is an x-ray tube; or

c. "CAUTION - RADIOACTIVE MATERIAL", or words having a similar intent, on the source housing in accordance with chapter 33.1-10-04.2 if the radiation source is a radionuclide.

5. Shutters. On open-beam configurations installed after August 1, 1979, each port on the radiation source housing shall be equipped with a shutter that cannot be opened unless a collimator or a coupling has been connected to the port.

6. Warning lights.

a. An easily visible warning light labeled with the words "X-RAY ON", or words having a similar intent, shall be located:

(1) Near any switch that energizes an x-ray tube and shall be illuminated only when the tube is energized; or

(2) In the case of a radioactive source, near any switch that opens a housing shutter, and shall be illuminated only when the shutter is open.

b. On equipment installed after August 1, 1979, warning lights shall have fail-safe characteristics.

7. **Radiation source housing.** Each radiation source housing is subject to the following requirements:

a. Each x-ray tube housing shall be equipped with an interlock that shuts off the tube if it is removed from the radiation source housing or if the housing is disassembled.

b. Each radioactive source housing or port cover or each x-ray tube housing shall be so constructed that, with all shutters closed, the radiation measured at a distance of five centimeters from its surface is not capable of producing a dose in excess of twenty-five hundredths millisieverts [2.5 millirems] in one hour. For systems utilizing x-ray tubes, this limit shall be met at any specified tube rating.

8. **Generator cabinet.** Each x-ray generator shall be supplied with a protective cabinet which limits leakage radiation measured at a distance of five centimeters from its surface such that it is not capable of producing a dose in excess of two and one-half microsieverts [0.25 millirem] in one hour.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-08-04. Area requirements.

1. **Radiation levels.** The local components of an analytical x-ray system shall be located and arranged and shall include sufficient shielding or access control such that no radiation levels exist in any area surrounding the local component group which could result in a dose to an individual present therein in excess of the dose limits given in chapter 33.1-10-04.2. For systems utilizing x-ray tubes, these levels shall be met at any specified tube rating.

2. **Surveys.**

a. Radiation surveys, as required by chapter 33.1-10-04.2, of all analytical x-ray systems sufficient to show compliance with subsection 1 shall be performed:

(1) Upon installation of the equipment, and at least once every twelve months thereafter.

(2) Following any change in the initial arrangement, number, or type of local components in the system.

(3) Following any maintenance requiring the disassembly or removal of a local component in the system.

- (4) During the performance of maintenance and alignment procedures if the procedures require the presence of a primary x-ray beam when any local component in the system is disassembled or removed.
 - (5) Any time a visual inspection of the local components in the system reveals an abnormal condition.
 - (6) Whenever personnel monitoring devices show a significant increase over the previous monitoring period or the readings are approaching the limits specified in chapter 33.1-10-04.2.
- b. Radiation survey measurements shall not be required if a registrant can demonstrate compliance with subsection 1 to the satisfaction of the department.
3. **Posting.** Each area or room containing analytical x-ray equipment shall be conspicuously posted with a sign or signs bearing the radiation symbol and the words "CAUTION - X-RAY EQUIPMENT", or words having a similar intent in accordance with chapter 33.1-10-04.2.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-08-05. Operating requirements.

- 1. **Procedures.** Normal operating procedures shall be written and available to all analytical x-ray equipment workers. No individual shall be permitted to operate analytical x-ray equipment in any manner other than that specified in the procedures unless such individual has obtained written approval of the radiation safety officer.
- 2. **Bypassing.** No individual shall bypass a safety device or interlock unless such individual has obtained the approval of the radiation safety officer. Such approval shall be for a specified period of time. When a safety device or interlock has been bypassed, a readily discernible sign bearing the words "SAFETY DEVICE NOT WORKING", or words having a similar intent, shall be placed on the radiation source housing.
- 3. **Repair or modification of x-ray tube systems.** Except as specified in subsection 2, no operation involving removal of covers, shielding materials, or tube housings or modifications to shutters, collimators, or beam stops shall be performed without ascertaining that the tube is off and will remain off until safe conditions have been restored. The main switch, rather than interlocks, shall be used for routine shutdown in preparation for repairs.
- 4. **Radioactive source replacement, testing, or repair.** Radioactive source housings shall be opened for source replacement, leak testing, or other maintenance or repair procedures only by individuals authorized to specifically conduct such procedures under a license issued by the United States nuclear regulatory commission, an agreement state, or a licensing state.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-08-06. Personnel requirements.

1. **Instruction.** No individual shall be permitted to operate or maintain analytical x-ray equipment unless such individual has received instruction in and demonstrated competence as to all of the following:

a. Identification of radiation hazards associated with the use of the equipment.

b. Significance of the various radiation warning, safety devices, and interlocks incorporated into the equipment, or the reasons they have not been installed on certain pieces of equipment and the extra precautions required in such cases.

c. Proper operating procedures for the equipment.

d. Recognition of symptoms of an acute localized exposure.

e. Proper procedures for reporting an actual or suspected exposure.

2. **Personnel monitoring.**

a. Finger or wrist dosimetric devices shall be provided to and shall be used by:

(1) Analytical x-ray equipment workers using systems having an open-beam configuration and not equipped with a safety device.

(2) Personnel maintaining analytical x-ray equipment if the maintenance procedures require the presence of a primary x-ray beam when any local component in the analytical x-ray system is disassembled or removed.

b. Reported dose values shall not be used for the purpose of determining compliance with chapter 33.1-10-04.2 unless evaluated by a qualified expert.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-09 **RADIATION SAFETY REQUIREMENTS FOR PARTICLE ACCELERATORS**

Section

33.1-10-09-01 Purpose and Scope

33.1-10-09-02 Registration Procedure

33.1-10-09-03 Radiation Safety Requirements for the Use of Particle Accelerators

33.1-10-09-01. Purpose and scope.

1. This chapter establishes procedures for the registration and the use of particle accelerators.

2. In addition to the requirements of this chapter, all registrants are subject to the requirements of chapters 33.1-10-01, 33.1-10-02, 33.1-10-04.2, and 33.1-10-10.1. Registrants engaged in industrial radiographic operations are subject to the requirements of chapter 33.1-10-05.1 and registrants engaged in the healing arts are subject to the requirements of chapter 33.1-10-06 or 33.1-10-07.2, or both. Registrants whose operations result in the production of radioactive material are subject to the requirements of chapter 33.1-10-03.1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-09-02. Registration procedure.

1. **Registration requirements.** No person shall receive, possess, use, transfer, own, or acquire a particle accelerator except as authorized in a registration issued pursuant to chapter 33.1-10-02.
2. **General requirements for the issuance of a registration for particle accelerators.** (Refer to chapter 33.1-10-02.) In addition to the requirements of chapter 33.1-10-02, a registration application for use of a particle accelerator will be approved only if the department determines all of the following:
 - a. The applicant is qualified by reason of training and experience to use the accelerator in question for the purpose requested in accordance with this chapter and chapters 33.1-10-04.2 and 33.1-10-10.1 in such a manner as to minimize danger to public health and safety or property.
 - b. The applicant's proposed or existing equipment, facilities, operating and emergency procedures are adequate to protect health and minimize danger to public health and safety or property.
 - c. The issuance of the registration will not be inimical to the health and safety of the public, and the applicant satisfies any applicable special requirement in subsection 3.
 - d. The applicant has appointed a radiation safety officer.
 - e. The applicant or the applicant's staff has substantial experience in the use of particle accelerators and training sufficient for application to its intended uses.
 - f. The applicant has established a radiation safety committee to approve, in advance, proposals for uses of particle accelerators, whenever deemed necessary by the department.
 - g. The applicant has an adequate training program for particle accelerator operators.
3. **Human use of particle accelerators.** In addition to the requirements set forth in chapter 33.1-10-02, a registration for use of a particle accelerator in the healing arts will be issued only if all of the following are met:

- a. Whenever deemed necessary by the department, the applicant has appointed a medical committee of at least three members to evaluate all proposals for research, diagnostic, and therapeutic use of a particle accelerator. Membership of the committee should include physicians expert in internal medicine, hematology, therapeutic radiology, and a person experienced in depth dose calculations and protection against radiation.
- b. The individuals designated on the application as the users have substantial training and experience in deep therapy techniques or in the use of particle accelerators to treat humans.
- c. The individual designated on the application as the user must be a physician.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-09-03. Radiation safety requirements for the use of particle accelerators.

1. General requirements.

- a. This section establishes radiation safety requirements for the use of particle accelerators. The requirements of this section are in addition to, and not in substitution for, other applicable requirements of the chapter.
- b. The registrant shall be responsible for assuring that all requirements of this chapter are met.

2. Limitations.

- a. No registrant shall permit any individual to act as an operator of a particle accelerator until such individual has:
 - (1) Been instructed in radiation safety and shall have demonstrated an understanding thereof.
 - (2) Received copies of and instruction in this chapter and the applicable requirements of chapters 33.1-10-04.2 and 33.1-10-10.1, pertinent registration conditions and the registrant's operating and emergency procedures, and shall have demonstrated understanding thereof.
 - (3) Demonstrated competence to use the particle accelerator, related equipment, and survey instruments which will be employed.
- b. The radiation safety committee or the radiation safety officer shall have the authority to terminate the operations at a particle accelerator facility if such action is deemed necessary to protect health and minimize danger to public health and safety or property.

3. Shielding and safety design requirements.

- a. A qualified expert, specifically approved by the department, shall be consulted in the design of a particle accelerator installation and called upon to perform a radiation survey when the accelerator is first capable of producing radiation.
- b. Each particle accelerator installation shall be provided with such primary or secondary barriers as are necessary to assure compliance with chapter 33.1-10-04.2.

4. Particle accelerator controls and interlock systems.

- a. Instrumentation, readouts, and controls on the particle accelerator control console shall be clearly identified and easily discernible.
- b. Each entrance into a target room or other high radiation area shall be provided with a safety interlock that shuts down the machine under conditions of barrier penetration.
- c. Each safety interlock shall be on a circuit which shall allow its operation independently of all other safety interlocks.
- d. All safety interlocks shall be designed so that any defect or component failure in the interlock system prevents operation of the accelerator.
- e. When a safety interlock system has been tripped, it shall only be possible to resume operation of the accelerator by manually resetting controls at the position where the interlock has been tripped, and lastly at the main control console.
- f. A scram button or other emergency power cutoff switch shall be located and easily identifiable in all high radiation areas. Such a cutoff switch shall include a manual reset so that the accelerator cannot be restarted from the accelerator control console without resetting the cutoff switch.

5. Warning devices.

- a. All locations designated as high radiation areas, and entrances to such locations, shall be equipped with easily observable warning lights that operate when, and only when, radiation is being produced.
- b. Except in facilities designed for human exposure, each high radiation area shall have an audible warning device which shall be activated for fifteen seconds prior to the possible creation of such high radiation area. Such warning device shall be clearly discernible in all high radiation areas and all areas immediately adjacent to the high radiation areas.
- c. Barriers, temporary or otherwise, and pathways leading to high radiation areas shall be posted in accordance with chapter 33.1-10-04.2.

6. Operating procedures.

- a. Particle accelerators, when not in operation, shall be secured to prevent unauthorized use.

- b. The safety interlock system shall not be used to turn off the accelerator beam except in an emergency.
- c. All safety and warning devices, including interlocks, shall be checked for proper operability at intervals not to exceed three months. Results of such tests shall be maintained at the accelerator facility for inspection by the department.
- d. Electrical circuit diagrams of the accelerator and the associated interlock systems shall be kept current and maintained for inspection by the department and shall be available to the operator at each accelerator facility.
- e. If, for any reason, it is necessary to intentionally bypass a safety interlock or interlocks, such action shall be:
 - (1) Authorized by the radiation safety committee or radiation safety officer.
 - (2) Recorded in a permanent log and a notice posted at the accelerator control console.
 - (3) Terminated as soon as possible.
- f. A copy of the current operating and the emergency procedures shall be maintained at the accelerator control panel.

7. Radiation monitoring requirements.

- a. There shall be available at each particle accelerator facility, appropriate portable monitoring equipment which is operable and has been appropriately calibrated for the radiations being produced at the facility. Such equipment shall be tested for proper operation daily and calibrated at intervals not to exceed one year, and after each servicing and repair.
- b. A radiation protection survey shall be performed and documented by a qualified expert, specifically approved by the department, when changes have been made in shielding, operation, equipment, or occupancy of adjacent areas.
- c. Radiation levels in all high radiation areas shall be continuously monitored. The monitoring devices shall be electrically independent of the accelerator control and safety interlock systems and capable of providing a readout at the control panel.
- d. All area monitors shall be calibrated at intervals not to exceed one year and after each servicing and repair.
- e. Whenever applicable, periodic surveys shall be made to determine the amount of airborne particulate radioactivity present.
- f. Whenever applicable, periodic wipe test surveys shall be made to determine the degree of contamination.

g. All surveys shall be made in accordance with the written procedures established by a qualified expert, specifically approved by the department, or the radiation safety officer of the particle accelerator facility.

h. Records of all radiation protection surveys, calibration results, instrumentation tests and wipe test results must be maintained at the accelerator facility for inspection by the department.

8. Ventilation systems.

a. Means shall be provided to ensure that personnel entering any area where airborne radioactivity may be produced will not be exposed to airborne radioactive material in excess of those limits specified in chapter 33.1-10-04.2, appendix B.

b. A registrant, as required by chapter 33.1-10-04.2, shall not vent, release, or otherwise discharge airborne radioactive material to an unrestricted area which exceeds the limits specified in chapter 33.1-10-04.2, appendix B, table II, except as authorized pursuant to chapter 33.1-10-04.2. For purposes of this subdivision, concentrations may be averaged over a period not greater than one year. Every reasonable effort should be made to maintain releases of radioactive material to unrestricted areas, as far below these limits as is reasonably achievable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-10 **[RESERVED]**

CHAPTER 33.1-10-10.1 **NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS - INSPECTIONS**

Section

33.1-10-10.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 19

33.1-10-10.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 19.

10 Code of Federal Regulations 19.1, 19.2, 19.3, 19.5, 19.11, 19.12, 19.13, 19.14, 19.15, 19.16, 19.17, 19.18, 19.20, 19.31, and 19.32 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 19.14(a).

2. All of the requirements in chapter 33.1-10-10.1 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations part 19 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", and a reference to "licensed radioactive material" includes "registered source of radiation". "Registrant" means any person who is registered with the

department and is legally obligated to register with the department pursuant to article 33.1-10 and North Dakota Century Code chapter 23.1-03. "Registration" means the notification of the department of environmental quality of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.

3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", "administrator of the appropriate commission regional office", "administrator of the appropriate regional office", "regional office administrator", "executive director for operations", "regional administrator of the appropriate United States nuclear regulatory commission regional office", or "agency" appear in 10 Code of Federal Regulations part 19, substitute the words "department of environmental quality".
4. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. State form number 8414, "notice to employees", must be posted in place of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations 19.
6. Where 10 Code of Federal Regulations part 19 specifies contacting the United States nuclear regulatory commission, contact the department of environmental quality.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-11

FEEES FOR ISSUANCE OF LICENSE AND REGISTRATION

CERTIFICATES AND INSPECTIONS

Section

33.1-10-11-01 Purpose

33.1-10-11-02 Scope

33.1-10-11-03 Exemptions

33.1-10-11-04 Payment of Fees

33.1-10-11-05 Failure by Applicant or Licensee to Pay Prescribed Fees

33.1-10-11-01. Purpose.

This chapter establishes fees charged for the issuance of licenses and registration certificates by the department. This chapter also establishes fees charged to recover costs associated with nonroutine regulatory inspections and surveys of licensees and registrants.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-11-02. Scope.

This chapter applies to a person who is an applicant for, or a holder of, a radioactive material license or a registration certificate issued by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-11-03. Exemptions.

No application fees, license fees, amendment fees, renewal fees, or special project fees, shall be required for:

1. A license authorizing the use of source material as shielding only in devices and containers; provided, however, that all other licensed byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material in the device or container will be subject to the fees prescribed in appendix A of this chapter.
2. Nonprofit educational institutions are exempt from the fees prescribed in appendices A and B of this chapter. This exemption does not apply to those radioactive material licenses or machine registration certificates which authorize any of the following:
 - a. Human use.
 - b. Remunerated services to other persons.
 - c. Distribution of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material, or products containing byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material.
 - d. Activities performed under a government contract.
3. The department may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of this chapter as it determines are authorized by law and are otherwise in the public interest.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-11-04. Payment of fees.

The following fees are nonrefundable:

1. **License and registration fees.** The appropriate licensing or registration fee shall accompany the application for licensure or registration when filed with the department. For new radioactive material licenses, the application fee is equal to the appropriate annual fee.

2. **Amendment fees.** The amendment fee given in appendix A category 24 shall accompany the application for amendment when filed with the department.

3. **Reciprocity fee.** The appropriate reciprocity fee shall accompany the written notification as required in chapters 33.1-10-03.1 and 33.1-10-02.

4. **Special project fees.** Fees for special projects are payable upon notification by the department when the review of the project is completed. Special projects mean those projects submitted to the department for review and for which specific fees are not prescribed in this chapter. Special project fees will be based upon the current professional staff hourly rate (thirty-three percent of the current nuclear regulatory commission rate listed in 10 CFR 170).

5. **Annual fees.** Annual fees are required to be paid by all radioactive material licensees no later than January first of each year the license is active, except that the annual fee due on January first of the year following the issuance of a new license shall be prorated to the number of months the license was in effect the first calendar year (example: for a new license issued in May the annual fee due January first would be seven-twelfths [June-December] of the annual fee listed in appendix A).

6. **Inspection and survey fees.** Fees for regulatory inspections and surveys of North Dakota licensees are included in the registration or annual fees for each registration or license type. Nonroutine inspections will require the nonroutine inspection fee to be paid upon notification by the department when the inspection has been completed.

7. **Annual fees for small entities.** If a licensee qualifies as a small entity and provides the department with the proper certification, the small entity fee of sixty percent of the applicable annual fee listed in appendix A shall be paid.

a. "Small business" means a business entity, including its affiliates, which:

(1) Is independently owned and operated; and

(2) Employs fewer than twenty-five full-time employees or has gross annual sales of less than two million five hundred thousand dollars;

b. "Small entity" includes small business, small organization, and small political subdivision;

c. "Small organization" means any not-for-profit enterprise that is independently owned and operated and is not dominant in its field; and

d. "Small political subdivision" means a political subdivision with a population of less than five thousand.

e. A licensee who seeks to establish status as a small entity for purposes of paying the fees required under this chapter shall file a certification statement with the department. The licensee shall:

(1) Certify, on the business's letterhead, that the business meets the conditions in this subsection;

(2) Sign the certification as the chief executive officer of the business or as an official designee; and

(3) Have the certification notarized.

f. A licensee who seeks to qualify as a small entity shall submit the certification with the reduced annual fee payment.

g. For purposes of this chapter, the licensee shall submit a new certification with its annual fee payment each year.

8. **Method of payment.** Fee payments shall be by check, draft, or money order made payable to the department of environmental quality

9. **Submittal of application and fee payment.** The application for licensure or registration shall be accompanied by the fee payment and shall be submitted to:

Department of Environmental Quality
Division of Air Quality
918 East Divide Avenue, Second Floor
Bismarck, ND 58501-1947

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

33.1-10-11-05. Failure by applicant or licensee to pay prescribed fees.

1. In any case where the department finds that an applicant or a licensee has failed to pay a prescribed fee required in this chapter, the department will not process any application and may suspend or revoke any license or approval involved or may issue an order with respect to licensed activities as the department determines to be appropriate or necessary in order to carry out the provisions of this chapter and of the North Dakota Century Code.

2. In any case where the department does not receive the prescribed fee by the stated due date, an additional fee shall be levied as stated in category 27 of appendix A.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

Appendix A - Schedule of Fees for 2016 Radioactive Material Licenses

Applicants for radioactive material licenses and other regulatory services and holders of radioactive material licenses shall pay the following fees.

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
<u>1. SPECIAL NUCLEAR MATERIAL</u>				
<u>A</u>	<u>Licenses for possession and use of 200 grams or more of plutonium in unsealed form or 350 grams or more of contained U-235 in unsealed form or 200 grams or more of U-233 in unsealed form. This includes applications to terminate licenses as well as licenses authorizing possession only.</u>	<u>Nonroutine inspection</u>	<u>Full cost</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$221,640</u>	
<u>B</u>	<u>Licenses for receipt and storage of spent fuel at an independent spent fuel storage installation (regulated by NRC)</u>	<u>Nonroutine inspection</u>	<u>N/A</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>N/A</u>	
<u>C</u>	<u>Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers</u>	<u>Nonroutine inspection</u>	<u>\$1,370</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,910</u>	
<u>D</u>	<u>All other special nuclear material licenses except licenses authorizing special nuclear material in unsealed form in combination that would constitute a critical quantity</u>	<u>Nonroutine inspection</u>	<u>\$1,370</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,830</u>	
<u>2. SOURCE MATERIAL</u>				

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
A	<u>Licenses for possession and use of source material in recovery operations such as milling, in situ leaching, heap-leaching, refining uranium mill concentrates to uranium hexafluoride, or buying stations, ion exchange facilities and in processing of ores containing source material for extraction of metals other than uranium or thorium, including licenses authorizing the possession of byproduct waste material (tailings) from source material recovery operations, as well as licenses authorizing the possession and maintenance of a facility in a standby mode</u>	<u>Nonroutine inspection</u>	<u>Full cost</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,152,420</u>	
B	<u>Licenses for possession, use and or installation of source material for shielding only</u>	<u>Nonroutine inspection</u>	<u>\$410</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$670</u>	
C	<u>All other source material licenses</u>	<u>Nonroutine inspection</u>	<u>\$1,530</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$4,730</u>	
<u>3. BYPRODUCT, NATURALLY OCCURRING OR ACCELERATOR-PRODUCED RADIOACTIVE MATERIAL</u>				
A	<u>Licenses of broad scope for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material issued pursuant to chapter 33.1-10-03.1 for processing or manufacturing of items containing byproduct material or naturally occurring or accelerator-produced radioactive material for commercial distribution</u>	<u>Nonroutine inspection</u>	<u>\$3,260</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$13,490</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
<u>B</u>	<u>Other licenses for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material issued pursuant to chapter 33.1-10-03.1 for processing or manufacturing of items containing byproduct material or naturally occurring or accelerator-produced radioactive material for commercial distribution</u>	<u>Nonroutine inspection</u>	<u>\$2,030</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$6,210</u>	
<u>C</u>	<u>Licenses issued pursuant to chapter 33.1-10-03.1 authorizing the processing or manufacturing and distribution or redistribution of radiopharmaceuticals, generators, reagent kits and/or sources and devices containing byproduct material or naturally occurring or accelerator-produced radioactive material</u>	<u>Nonroutine inspection</u>	<u>\$1,940</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$13,490</u>	
<u>D</u>	<u>Licenses and approvals issued pursuant to chapter 33.1-10-03.1 authorizing distribution or redistribution of radiopharmaceuticals, generators, reagent kits and/or sources or devices not involving processing of byproduct material or naturally occurring or accelerator-produced radioactive material</u>	<u>Nonroutine inspection</u>	<u>\$1,220</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$5,390</u>	
<u>E</u>	<u>Licenses for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material in sealed sources for irradiation of materials in which the source is not removed from its shield (self-shielded units)</u>	<u>Nonroutine inspection</u>	<u>\$720</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,440</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
F	<u>Licenses for possession and use of less than 370 terabecquerels [10,000 curies] of byproduct material or naturally occurring or accelerator-produced radioactive material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes</u>	<u>Nonroutine inspection</u>	<u>\$790</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,370</u>	
G	<u>Licenses for possession and use of 370 terabecquerels [10,000 curies] or more of byproduct material or naturally occurring or accelerator-produced radioactive material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes</u>	<u>Nonroutine inspection</u>	<u>\$1,400</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$21,610</u>	
H	<u>Licenses issued pursuant to chapter 33.1-10-03.1 to distribute items containing byproduct material or naturally occurring or accelerator-produced radioactive material that require device review to persons exempt from the licensing requirements of chapter 33.1-10-03.1, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licenses of chapter 33.1-10-03.1</u>	<u>Nonroutine inspection</u>	<u>\$1,070</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$7,020</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
I	<u>Licenses issued pursuant to chapter 33.1-10-03.1 to distribute items containing byproduct material or naturally occurring or accelerator-produced radioactive material, or quantities of byproduct material or naturally occurring or accelerator-produced radioactive material that do not require device evaluation to persons exempt from the licensing requirements of chapter 33.1-10-03.1, except for specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of chapter 33.1-10-03.1</u>	<u>Nonroutine inspection</u>	<u>\$720</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$9,740</u>	
K	<u>Licenses issued pursuant to chapter 33.1-10-03.1 to distribute items containing byproduct material or naturally occurring or accelerator-produced radioactive material, or quantities of byproduct material or naturally occurring or accelerator-produced radioactive material that do not require sealed source and/or device review to persons generally licensed under this chapter, except specific licenses authorizing for redistribution of items that have been authorized for distribution to persons generally licensed under this chapter</u>	<u>Nonroutine inspection</u>	<u>\$1,060</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,700</u>	
L	<u>Licenses of broad scope for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material issued pursuant to chapter 33.1-10-03.1 for research and development that do not authorize commercial distribution</u>	<u>Nonroutine inspection</u>	<u>\$1,220</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$4,050</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
M	<u>Other licenses for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material issued pursuant to chapter 33.1-10-03.1 for research and development that do not authorize commercial distribution</u>	<u>Nonroutine inspection</u>	<u>\$930</u>	<u>Items 23 and/or 30 as applicable</u>
		<u>Annual fee</u>	<u>\$3,780</u>	
N	<u>Licenses that authorize services for other licensees, except (1) licenses that authorize calibration or leak testing services only are subject to the fees specified in fee Categories 15 and 16, and (2) licenses that authorize waste disposal services are subject to the fees specified in fee Categories 4A, 4B, and 4C.</u>	<u>Nonroutine inspection</u>	<u>\$1,060</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$6,110</u>	
O	<u>Licenses for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material issued pursuant to chapter 33.1-10-05.1 for industrial radiographic operations</u>	<u>Nonroutine inspection</u>	<u>\$2,550</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$8,250</u>	
P	<u>All other specific byproduct material or naturally occurring or accelerator-produced radioactive material licenses, except as described in item 1 below or listed in Categories 4A through 9</u>	<u>Nonroutine inspection</u>	<u>\$1,830</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,370</u>	
	<u>1 Portable x-ray fluorescence analyzers only</u>	<u>Nonroutine inspection</u>	<u>\$300</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$590</u>	
Q.	<u>Registration of a device(s) generally licensed under chapter 33.1-10-03.1</u>	<u>Nonroutine inspection</u>	<u>\$670</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,370</u>	
	<u>(Each address or location where the device(s) are used or stored represents a separate general license and requires a separate registration and fee.)</u>			

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
4. WASTE DISPOSAL AND PROCESSING				
A	<u>Licenses specifically authorizing the receipt of waste byproduct material, naturally occurring, technologically enhanced, or accelerator-produced radioactive material, source material, or special nuclear material from other persons for the purpose of contingency storage or commercial land disposal by the licensee; or licenses authorizing contingency storage of low-level radioactive waste at the site of nuclear power reactors; or licenses for receipt of waste from other persons for incineration or other treatment, packaging of resulting waste and residues, and transfer of packages to another person authorized to receive or dispose of waste material</u>	<u>Nonroutine inspection</u> <u>Annual fee</u>	<u>Full cost</u> <u>\$134,720</u>	<u>Items 23 and/or 27 as applicable</u>
B	<u>Licenses specifically authorizing the receipt of waste byproduct material, naturally occurring, technologically enhanced, or accelerator-produced radioactive material, source material, or special nuclear material from other persons for the purpose of packaging or repackaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.</u>	<u>Nonroutine inspection</u> <u>Annual fee</u>	<u>\$2,140</u> <u>\$16,180</u>	<u>Items 23 and/or 27 as applicable</u>

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
C	<u>Licenses specifically authorizing the receipt of prepackaged waste byproduct material, naturally occurring, technologically enhanced, or accelerator-produced radioactive material, source material, or special nuclear material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.</u>	<u>Nonroutine inspection</u>	<u>\$2,140</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$7,550</u>	
5. WELL LOGGING				
A	<u>Licenses for possession and use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, and/or special nuclear material for well logging, well surveys, and tracer studies other than field flooding tracer studies</u>	<u>Nonroutine inspection</u>	<u>\$1,220</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$6,750</u>	
B	<u>Licenses for possession and use of byproduct material or naturally occurring or accelerator-produced radioactive material, for field flooding tracer studies</u>	<u>Nonroutine inspection</u>	<u>Full cost</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$15,640</u>	
6. NUCLEAR LAUNDRY				
A	<u>Licenses for commercial collection and laundry of items contaminated with byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material</u>	<u>Nonroutine inspection</u>	<u>\$1,940</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$7,290</u>	
7. HUMAN USE OF BYPRODUCT, NATURALLY OCCURRING OR ACCELERATOR-PRODUCED, SOURCE, OR SPECIAL NUCLEAR MATERIAL				

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
A	<u>Licenses issued pursuant to chapter 33.1-10-03.1 for human use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material in sealed sources contained in teletherapy devices</u>	<u>Nonroutine inspection</u>	<u>\$1,940</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$16,770</u>	
B	<u>Licenses of broad scope issued to medical institutions or two or more physicians pursuant to chapter 33.1-10-03.1 authorizing research and development, including human use of byproduct material, except licenses for byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material in sealed sources contained in teletherapy devices</u>	<u>Nonroutine inspection</u>	<u>\$1,830</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$17,550</u>	
C	<u>Other licenses issued pursuant to chapter 33.1-10-03.1 for human use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, and/or special nuclear material, except licenses for byproduct material, source material, naturally occurring or accelerator-produced radioactive material, and special nuclear material in sealed sources contained in teletherapy devices</u>	<u>Nonroutine inspection</u>	<u>\$1,530</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$5,950</u>	
8. VETERINARY MEDICINE				
A	<u>Licenses issued for the veterinary use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material in animals for diagnostic procedures only</u>	<u>Nonroutine inspection</u>	<u>\$1,220</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$3,530</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
B	<u>Licenses issued for the veterinary use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material in animals for diagnostic and/or therapeutic procedures</u>	<u>Nonroutine inspection</u>	<u>\$1,220</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$4,050</u>	
9.	<u>Civil defense licenses for possession and use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material for civil defense activities</u>	<u>Nonroutine inspection</u>	<u>\$720</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,910</u>	
<u>10. DEVICE, PRODUCT OR SEALED SOURCE SAFETY EVALUATION (Regulated by NRC)</u>				
11.	<u>Licenses for possession and use of byproduct material, naturally occurring or accelerator-produced radioactive material, source material, or special nuclear material for civil defense activities</u>	<u>Nonroutine inspection</u>	<u>\$720</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,910</u>	
<u>12. SPENT FUEL STORAGE (Regulated by NRC)</u>				
<u>13. IMPORT AND EXPORT LICENSES (Regulated by NRC)</u>				
14.	<u>Reciprocity: Other agreement state and/or NRC licensees who conduct activities in North Dakota under the reciprocity provisions of chapters 33.1-10-03.1 and 33.1-10-19</u>	<u>Annual fee</u>	<u>Same as annual fee for license type</u>	<u>Items 23 and/or 27 as applicable</u>
	<u>(Application fee is due three working days prior to entering the state.)</u>	<u>Nonroutine inspection</u>	<u>Same as inspection fee for license type</u>	
<u>15. SERVICES FOR OTHER LICENSED ENTITIES</u>				
A	<u>Leak test and analysis services (for other licensed entities) only</u>	<u>Nonroutine inspection</u>	<u>\$930</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,760</u>	

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
<u>B</u>	<u>Instrument calibration services (for other licensed entities) only</u>	<u>Nonroutine inspection</u>	<u>\$930</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,760</u>	
<u>16.</u>	<u>Combination leak test and analysis services and instrument calibration services (for other licensed entities) only</u>	<u>Nonroutine inspection</u>	<u>\$1,070</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$2,370</u>	
<u>17.</u>	<u>Calibration and/or reference sources (not for providing service to other licensed entities) only</u>	<u>Nonroutine inspection</u>	<u>\$670</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,220</u>	
<u>18.</u>	<u>Storage of radioactive material only</u>	<u>Nonroutine inspection</u>	<u>\$930</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$1,630</u>	
<u>19.</u>	<u>Providing deliberate operations to reduce or remove residual radioactivity from equipment, facilities, and land owned, possessed, or controlled by other persons to a level that permits release of equipment, facilities, and land for unrestricted use and/or termination of a license rendered from a fixed facility or a mobile unit</u>	<u>Nonroutine inspection</u>	<u>\$1,370</u>	<u>Items 23 and/or 27 as applicable</u>
		<u>Annual fee</u>	<u>\$21,610</u>	
<u>20.</u>	<u>Radiation training courses involving the use of licensed material by the instructor and/or the participants</u>	<u>Annual fee</u>	<u>\$540</u>	<u>Item 27 as applicable</u>
<u>21.</u>	<u>Demonstration and sales of devices containing radioactive materials</u>	<u>Annual fee</u>	<u>\$540</u>	<u>Item 27 as applicable</u>
<u>22.</u>	<u>Installation, removal, repair, and servicing of devices containing radioactive materials</u>	<u>Annual fee</u>	<u>\$2,070</u>	<u>Item 27 as applicable</u>
<u>23.</u>	<u>Multiple offices: Add the following fees per additional office location (This does not apply to additional locations in Category 21 above.)</u>	<u>Annual fee</u>	<u>25 percent of base fee for category type per location</u>	<u>Item 27 as applicable</u>

<u>Category</u>	<u>Description</u>	<u>Base Fees (USD)</u>		<u>Additional Charges</u>
<u>24.</u>	<u>Administrative fee for all license amendments</u>	<u>Amendment</u>	<u>\$280</u>	<u>Item 27 as applicable</u>
<u>25.</u>	<u>Inspection of radioactive materials package shipments to low-level radioactive waste disposal facility</u>	<u>Inspection</u>	<u>Full cost</u>	<u>Item 27 as applicable</u>
<u>26.</u>	<u>Certificate - In vitro testing with radioactive material under general license</u>	<u>Certificate (valid for three years)</u>	<u>\$330</u>	<u>Item 27 as applicable</u>
<u>27.</u>	<u>Late payment of any fees described in items 1 through 26 above</u>	<u>From payment due date</u>	<u>\$1</u>	<u>An additional fee per day after 30 days late</u>

Note 1: All fee amounts are shown in United States dollars (USD).

Note 2: The fees established under this appendix may be adjusted on an annual basis to account for any increase in the consumer price index published by the department of labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year. Fee adjustments will be rounded off to the nearest dollar amount (example: for a value of 0.50 or greater, the number would be rounded up; for a value of 0.49 or less, the number would be rounded down).

Note 3: A current list of fees established under this appendix will be maintained on the department of environmental quality website.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-09, 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

Appendix B
2016 Schedule of Fees for Registration
Certification and Inspection

Applications for registration of radiation machines and other regulatory services shall pay the following fees for each machine that they possess and use at their facilities. The fees cover a three-year registration period and the renewal fee is the amount listed.

<u>Registration Category</u>	<u>Fee/Machine (in U.S. Dollars)</u>
<u>Dentistry</u>	<u>\$230</u>
<u>Medical:</u>	
A. <u>Radiographic machine (including computer tomography)</u>	<u>\$350</u>
B. <u>Fluoroscopic machine</u>	<u>\$530</u>
C. <u>Combined radiographic-fluoroscopic</u>	<u>\$700</u>
D. (1) <u>Therapeutic: Linear accelerator (less than 10 MeV)</u>	<u>\$530</u>
(2) <u>Therapeutic: Linear accelerator (greater than 10 MeV)</u>	<u>\$850</u>
E. <u>Superficial x-ray</u>	<u>\$260</u>
<u>Chiropractic</u>	<u>\$320</u>
<u>Podiatry</u>	<u>\$260</u>
<u>Veterinary medicine</u>	<u>\$230</u>
<u>Industrial radiography</u>	<u>\$850</u>
<u>Accelerators (industrial and research)</u>	<u>\$530</u>
<u>Education and research</u>	<u>\$530</u>
	<u>Annual Service Fees</u>
<u>Other Registration Fees and Services</u>	<u>(in U.S. Dollars)</u>
<u>X-ray services and installers</u>	<u>\$530</u>
<u>Radiation training courses</u>	<u>\$350</u>
<u>X-ray sales and demonstrations</u>	<u>\$530</u>
<u>Combined sales and service (assembler)</u>	<u>\$700</u>
<u>Dosimeterists and physicists</u>	<u>\$350</u>
<u>Shielding evaluations (routine)</u>	<u>\$530 per evaluation</u>
<u>Shielding evaluations (nonroutine)</u>	<u>Full cost</u>
<u>Reciprocity (x-ray producing machines)</u>	<u>\$530 per year per machine</u>

Note 1: All fee amounts are shown in United States dollars (USD).

Note 2: The fees established under this appendix may be adjusted on an annual basis to account for any increase in the consumer price index published by the department of labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year. Fee adjustments

will be rounded off to the nearest dollar amount (example: for a value of 0.50 or greater, the number would be rounded up; for a value of 0.49 or less, the number would be rounded down).

Note 3: A current list of fees established under this appendix will be maintained on the department of environmental quality website.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-09, 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-03-09; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-12

[RESERVED]

CHAPTER 33.1-10-12.1

LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING

Section

33.1-10-12.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations
Part 39

33.1-10-12.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 39.

10 Code of Federal Regulations 39.1, 39.2, 39.11, 39.13, 39.15, 39.17, 39.31, 39.33, 39.35, 39.37, 39.39, 39.41, 39.43, 39.45, 39.47, 39.49, 39.51, 39.53, 39.55, 39.61, 39.63, 39.65, 39.67, 39.69, 39.71, 39.73, 39.75, 39.77, and 39.91 are adopted by reference as they exist on October 1, 2015, with the following exceptions:

1. All of the requirements in chapter 33.1-10-12.1 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations part 39 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", a reference to "licensed material" includes "registered source of radiation", and a reference to "licensed radioactive materials" includes "registered source of radiation". "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to article 33.1-10 and North Dakota Century Code chapter 23.1-03. "Registration" means the notification of the department of environmental quality of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.
2. Where the words "NRC", "commission", or "NRC regional office" appear in 10 Code of Federal Regulations part 39, substitute the words "department of environmental quality".
3. Requirements in 10 Code of Federal Regulations part 39 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
4. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations part 39.

5. For references to 10 Code of Federal Regulations part 170, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-13

[RESERVED]

CHAPTER 33.1-10-13.1

PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

Section

33.1-10-13.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 71

33.1-10-13.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 71.

10 Code of Federal Regulations 71.0, 71.3, 71.4, 71.5, 71.7, 71.8, 71.9, 71.10, 71.12, 71.13, 71.14, 71.15, 71.17, 71.21, 71.22, 71.23, 71.47, 71.81, 71.83, 71.85, 71.87, 71.88, 71.89, 71.91, 71.93, 71.95, 71.97, 71.101, 71.103, 71.105, 71.106, 71.127, 71.129, 71.131, 71.133, 71.135, and 71.137 and appendix A to part 71 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations 71.0(d), 71.14(b), 71.85(a)-(c), 71.91(b), 71.101(c)(2), (d), and (e).
2. Requirements in 10 Code of Federal Regulations part 71 that apply to "licensed material" or "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations part 71, substitute the words "department of environmental quality" except when used in 10 Code of Federal Regulations 71.5(b), 71.10, 71.17(c)(3) and (e), 71.85(c), 71.88(a)(4), 71.93(c), 71.95, 71.97(c), and (c)(3)(iii), and (f).
4. The terms "certificate of compliance, compliance holder or applicant" used in 10 Code of Federal Regulations 71.91(c) and (d), 71.101(a)-(c), 71.103(a), and 71.135 apply only to the U.S. Nuclear Regulatory Commission (NRC) as the NRC is the sole authority for issuing a package's Certificate of Compliance.
5. 10 Code of Federal Regulations 71.9 employee protection also applies to violations of North Dakota Century Code chapters 23.1-02 and 23.1-03.

6. State form number 8414, "notice to employees", must be posted instead of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations part 71.

History: Effective _____, 2018.

General Authority: NDCC 28-32-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 28-32-02

CHAPTER 33.1-10-14 **[RESERVED]**

CHAPTER 33.1-10-14.1 **LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS**

Section

33.1-10-14.1-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 36

33.1-10-14.1-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 36.

10 Code of Federal Regulations 36.1, 36.2, 36.11, 36.13, 36.15, 36.17, 36.19, 36.21, 36.23, 36.25, 36.27, 36.29, 36.31, 36.33, 36.35, 36.37, 36.39, 36.41, 36.51, 36.53, 36.55, 36.57, 36.59, 36.61, 36.63, 36.65, 36.67, 36.69, 36.81, and 36.83 are adopted by reference as they exist on October 1, 2015, with the following exceptions:

1. Not adopted by reference is paragraph (2) of the definition of "commencement of construction", and paragraph (9)(ii) of the definition "construction".
2. Requirements in 10 Code of Federal Regulations part 36 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", or "NRC regional office" appear in 10 Code of Federal Regulations part 36, substitute the words "department of environmental quality".
4. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations part 36.
6. For references to 10 Code of Federal Regulations parts 170 and 171, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-15 **THERAPEUTIC RADIATION MACHINES**

Section

33.1-10-15-01 Scope

33.1-10-15-02 Definitions

33.1-10-15-03 General Administrative Requirements

33.1-10-15-04 General Technical Requirements

33.1-10-15-05 Quality Management Program

33.1-10-15-06 Therapeutic Radiation Machines of Less Than Five Hundred Kilovolts

33.1-10-15-07 Therapeutic Radiation Machines - Photon Therapy Systems (Five Hundred Kilovolts and Above) and Electron Therapy Systems (Five Hundred Kilo Electron Volts and Above)

33.1-10-15-08 Calibration of Survey Instruments

33.1-10-15-09 Shielding and Safety Design Requirements

33.1-10-15-01. Scope.

1. This chapter establishes requirements, for which the registrant is responsible, for use of therapeutic radiation machines. The provisions of this chapter are in addition to, and not in substitution for, other applicable provisions of these regulations.
2. The use of therapeutic radiation machines shall be by, or under the supervision of, a licensed practitioner of the healing arts who meets the training and experience criteria established by subsection 3 of section 33.1-10-15-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-02. Definitions.

As used in this chapter, the following definitions apply:

1. "Absorbed dose (D)" means the mean energy imparted by ionizing radiation to matter. Absorbed dose is determined as the quotient of dE by dM, where dE is the mean energy imparted by ionizing radiation to matter of mass dM. The SI unit of absorbed dose is joule per kilogram and the special name of the unit of absorbed dose is the gray (Gy). The previously used special unit of absorbed dose (rad) is being replaced by the gray.
2. "Absorbed dose rate" means absorbed dose per unit time, for machines with timers, or dose monitor unit per unit time for linear accelerators.
3. "Accelerator-produced material" means any material made radioactive by exposing it in a particle accelerator.
4. "Accessible surface" means surface of equipment or of an equipment part that can be touched by persons without the use of a tool.
5. "Activity" means the rate of disintegration or transformation or decay of radioactive material. The units of activity are the becquerel (Bq) and the curie (Ci).
6. "Added filtration" means any filtration which is in addition to the inherent filtration.

7. "Air kerma (K)" means the kinetic energy released in air by ionizing radiation. Kerma is determined as the quotient of dE by dM, where dE is the sum of the initial kinetic energies of all the charged ionizing particles liberated by uncharged ionizing particles in air of mass dM. The SI unit of air kerma is joule per kilogram and the special name for the unit of kerma is the gray (Gy).
8. "Barrier" (see "protective barrier").
9. "Beam axis" means the axis of rotation of the beam-limiting device from the source through the centers of the x-ray field.
10. "Beam-limiting device" means a device which provides a means to restrict the dimensions of the useful beam.
11. "Beam-monitoring system" means a system designed and installed in the radiation head to detect and measure the radiation present in the useful beam.
12. "Beam-scattering foil" means a thin piece of material (usually metallic) placed in the beam to scatter a beam of electrons in order to provide a more uniform electron distribution in the useful beam.
13. "Bent-beam linear accelerator" means a linear accelerator geometry in which the accelerated electron beam must change direction by passing through a bending magnet.
14. "Brachytherapy" means a method of radiation therapy in which sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, or interstitial application.
15. "Calibration" means the determination of:
 - a. The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or
 - b. The strength of a source of radiation relative to a standard.
16. "CFR" means the Code of Federal Regulations.
17. "Changeable filters" means any filter, exclusive of inherent filtration, which can be removed from the useful beam through any electronic, mechanical, or physical process.
18. "Contact therapy system" means an x-ray system used for therapy with the x-ray tube port placed in contact with or within five centimeters of the surface being treated.
19. "Department" means the department of environmental quality.
20. "Detector" (see "radiation detector").
21. "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these rules, "radiation dose" is an equivalent term.

22. "Dose equivalent H_T " means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the sievert (Sv) and rem.
23. "Dose monitor unit (DMU)" means a unit response from the beam-monitoring system from which the absorbed dose can be calculated.
24. "Electron applicator" means any accessory device utilized during electron therapy which determines the extent of the treatment area at a given distance from the source.
25. "Entrance" means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed or registered radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.
26. "Exposure" means being exposed to ionizing radiation or to radioactive material.
27. "External beam radiation therapy" means therapeutic irradiation in which the source of radiation is at a distance from the body.
28. "Field-flattening filter" means a filter used to homogenize the absorbed dose rate over the radiation field.
29. "Filter" means material placed in the useful beam to absorb preferentially selected radiations.
30. "Gantry" means that part of a radiation therapy system supporting and allowing movements of the radiation head about a center of rotation.
31. "Gray (Gy)" means the SI unit of absorbed dose, kerma, and specific energy imparted equal to one joule per kilogram. The previous unit of absorbed dose (rad) is being replaced by the gray. [1 Gy = 100 rad].
32. "Half-value layer (HVL)" means the thickness of a specified material which attenuates x-radiation or gamma radiation to an extent such that the air kerma rate, exposure rate, or absorbed dose rate is reduced to one-half of the value measured without the material at the same point.
33. "Healing arts" means diagnostic or healing treatment of human and animal maladies, including the following which are duly licensed by the state of North Dakota for the lawful practice of: medicine and its associated specialties, dentistry, veterinary medicine, osteopathy, chiropractic, and podiatry.
34. "Individual" means any human being.
35. "Inspection" means an official examination or observation, including tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements, and conditions of the department.
36. "Interlock" means a device preventing the start or continued operation of equipment unless certain predetermined conditions prevail.

37. "Interruption of irradiation" means the stopping of irradiation with the possibility of continuing irradiation without resetting of operating conditions at the control panel.
38. "Irradiation" means the exposure of a living being or matter to ionizing radiation.
39. "Isocenter" means the center of the sphere through which the useful beam axis passes while the gantry moves through its full range of motions.
40. "Kilovolt (kV) [kilo electron volt (keV)]" means the energy equal to that acquired by a particle with one electron charge in passing through a potential difference of one thousand volts in a vacuum. [Note: Current convention is to use kV for photons and keV for electrons.]
41. "Lead equivalent" means the thickness of lead affording the same attenuation, under specified conditions, as the material in question.
42. "Leakage radiation" means radiation emanating from the diagnostic or therapeutic source assembly except for:
- a. The useful beam; and
 - b. Radiation produced when the exposure switch or timer is not activated.
43. "Light field" means the area illuminated by light, simulating the radiation field.
44. "mA" means milliampere.
45. "Medical use" means the intentional internal or external administration of radiation or radioactive material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user as defined in chapter 33.1-10-07.2-01 [10 CFR 35.2].
46. "Megavolt (MV) [megaelectron volt (MeV)]" means the energy equal to that acquired by a particle with one electron charge in passing through a potential difference of one million volts in a vacuum. [Note: Current convention is to use MV for photons and MeV for electrons.]
47. "Monitor unit (MU)" (see "dose monitor unit").
48. "Monitoring" means the measurement of radiation and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, "radiation monitoring" and "radiation protection monitoring" are equivalent terms.
49. "Moving beam radiation therapy" means radiation therapy with any planned displacement of radiation field or patient relative to each other, or with any planned change of absorbed dose distribution. It includes arc, skip, conformal, intensity modulation, and rotational therapy.
50. "Nominal treatment distance" means:

- a. For electron irradiation, the distance from the scattering foil, virtual source, or exit window of the electron beam to the entrance surface of the irradiated object along the central axis of the useful beam.
 - b. For x-ray irradiation, the virtual source or target to isocenter distance along the central axis of the useful beam. For non-isocentric equipment, this distance shall be that specified by the manufacturer.
51. "Patient" means an individual or animal subjected to radiation for the purposes of diagnosis or treatment.
52. "Peak tube potential" means the maximum value of the potential difference across the x-ray tube during an exposure.
53. "Periodic quality assurance check" means a procedure which is performed to ensure that a previous calibration continues to be valid.
54. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing, other than the commission, or any successor thereto and other than federal government agencies licensed by the commission or any successor thereto.
55. "Phantom" means a volume of material behaving in a manner similar to tissue with respect to absorption and scattering of the ionizing radiation in question.
56. "Physician" means a medical doctor or doctor of osteopathy licensed by a state or territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine.
57. "Practical range of electrons" corresponds to classical electron range where the only remaining contribution to dose is from bremsstrahlung x-rays. A further explanation may be found in "clinical electron beam dosimetry: report of AAPM radiation therapy committee task group 25" [Medical Physics 18(1): 73-109, Jan./Feb. 1991] and ICRU report 35, "radiation dosimetry: electron beams with energies between 1 and 50 MeV", international commission on radiation units and measurements, September 15, 1984.
58. "Primary dose monitoring system" means a system which will monitor the useful beam during irradiation and which will terminate irradiation when a preselected number of dose monitor units have been delivered.
59. "Primary protective barrier" (see "protective barrier").
60. "Protective barrier" means a barrier of radiation absorbing materials used to reduce radiation exposure. The types of protective barriers are as follows:
- a. "Primary protective barrier" means the material, excluding filters, placed in the useful beam.
 - b. "Secondary protective barrier" means the material which attenuates stray radiation.

61. "Qualified expert" means an individual having the knowledge, training, and experience to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs, for example, individuals certified in the appropriate field by the American board of medical physics, or those having equivalent qualifications. With reference to the calibration of radiation therapy equipment, "qualified expert" means an individual having, in addition to the above qualifications, training and experience in the clinical applications of radiation physics to radiation therapy, for example, individuals certified in therapeutic radiological physics or x-ray and radium physics by the American board of radiology, or those having equivalent qualifications.
62. "Rad" means the special unit of absorbed dose. One rad is equal to an absorbed dose of one hundred erg per gram or one one-hundredth joule per kilogram (0.01 gray).
63. "Radiation" means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of these rules, ionizing radiation is an equivalent term. Radiation, as used in these rules, does not include nonionizing radiation, such as radiowaves or microwaves, visible, infrared, or ultraviolet light.
64. "Radiation detector" means a device which in the presence of radiation provides a signal or other indication suitable for use in measuring one or more quantities of incident radiation.
65. "Radiation exposure" means the quotient of dQ by dm where " dQ " is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass " dm " are completely stopped in air. The SI unit of radiation exposure is the coulomb per kilogram (C/kg). (See section 33.1-10-01-14 units of exposure, dose, and activity for the special unit equivalent "roentgen" (R).)
66. "Radiation exposure rate" means the radiation exposure per unit of time, such as R/min, mR/h, etc.
67. "Radiation field" (see "useful beam").
68. "Radiation head" means the structure from which the useful beam emerges.
69. "Radiation machine" means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.
70. "Radiation therapy physicist" means an individual qualified in accordance with subsection 4 of section 33.1-10-15-03.
71. "Radiation therapy simulation system" means a radiographic or fluoroscopic x-ray system intended for localizing the volume to be exposed during radiation therapy and confirming the position and size of the therapeutic irradiation field.
72. "Redundant beam-monitoring system" means a combination of two dose monitoring systems in which each system is designed to terminate irradiation in accordance with a preselected number of dose monitor units.

73. "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to this article and North Dakota Century Code chapter 23.1-03.
74. "Registration" means the notification of the department of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.
75. "Rem" (see "sievert").
76. "Restricted area" means an area, access to which is limited by the licensee or registrant for the purpose of protecting individuals against undue risks from exposure to sources of radiation or radioactive material. "Restricted area" does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.
77. "Scattered radiation" means radiation that, during passage through matter, has been deviated in direction.
78. "Secondary dose-monitoring system" means a system which will terminate irradiation in the event of failure of the primary dose-monitoring system.
79. "Secondary protective barrier" (see "protective barrier").
80. "Shadow tray" means a device attached to the radiation head to support auxiliary beam-blocking material.
81. "Shutter" means a device attached to the tube housing assembly which can intercept the entire cross-sectional area of the useful beam and which has a lead equivalency not less than that of the tube housing assembly.
82. "Sievert (Sv)" means the SI unit of dose equivalent. The unit of dose equivalent is the joule per kilogram. The previous unit of dose equivalent (rem) is being replaced by the sievert. [1 Sv = 100 rem].
83. "Source" means the region or material, or both, from which the radiation emanates.
84. "Source-skin distance (SSD)" (see "target-skin distance").
85. "Stationary beam radiation therapy" means radiation therapy without displacement of one or more mechanical axis relative to the patient during irradiation.
86. "Stray radiation" means the sum of leakage and scattered radiation.
87. "Target" means that part of an x-ray tube or accelerator onto which a beam of accelerated particles is directed to produce ionizing radiation or other particles.
88. "Target-skin distance (TSD)" means the distance measured along the beam axis from the center of the front surface of the x-ray target or electron virtual source, or both, to the surface of the irradiated object or patient.

89. "Tenth-value layer (TVL)" means the thickness of a specified material which attenuates x-radiation or gamma radiation to an extent such that the air kerma rate, exposure rate, or absorbed dose rate is reduced to one-tenth of the value measured without the material at the same point.
90. "Termination of irradiation" means the stopping of irradiation in a fashion which will not permit continuance of irradiation without the resetting of operating conditions at the control panel.
91. "Test" means a method for determining the characteristics or condition of sources of radiation or components thereof. "Test" may also mean the process of verifying compliance with this article.
92. "Therapeutic radiation machine" means x-ray or electron-producing equipment designed and used for external beam radiation therapy.
93. "Tube" means an x-ray tube, unless otherwise specified.
94. "Tube housing assembly" means the tube housing with tube installed. It includes high-voltage or filament transformers, or both, and other appropriate elements when such are contained within the tube housing.
95. "Unrestricted area" means an area, access to which is neither limited nor controlled by the licensee or registrant.
96. "Useful beam" means the radiation emanating from the tube housing port or the radiation head and passing through the aperture of the beam-limiting device when the exposure controls are in a mode to cause the system to produce radiation.
97. "Virtual source" means a point from which radiation appears to originate.
98. "Wedge filter" means an added filter effecting continuous progressive attenuation on all or a part of the useful beam.
99. "X-ray tube" means any electron tube which is designed for conversion of electrical energy into x-ray energy.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-03. General administrative requirements.

1. Administrative controls. The registrant shall be responsible for directing the operation of the therapeutic radiation machines that have been registered with the department. The registrant or the registrant's agent shall ensure that the requirements of chapter 33.1-10-15 are met in the operation of the therapeutic radiation machines.
2. A therapeutic radiation machine that does not meet the provisions of these regulations shall not be used for irradiation of patients.

3. Training for external beam radiation therapy authorized users. The registrant for any therapeutic radiation machine subject to section 33.1-10-15-06 or 33.1-10-15-07 shall require the authorized user to be a physician who:

a. Is certified in:

(1) Radiology or therapeutic radiology by the American board of radiology;

(2) Radiation oncology by the American osteopathic board of radiology;

(3) Radiology, with specialization in radiotherapy, as a British "fellow of the faculty of radiology" or "fellow of the royal college of radiology"; or

(4) Therapeutic radiology by the Canadian royal college of physicians and surgeons; or

b. Is in the active practice of therapeutic radiology, and has completed two hundred hours of instruction in basic radiation techniques applicable to the use of an external beam radiation therapy unit, five hundred hours of supervised work experience, and a minimum of three years of supervised clinical experience.

(1) To satisfy the requirement for instruction, the classroom and laboratory training shall include:

(a) Radiation physics and instrumentation;

(b) Radiation protection;

(c) Mathematics pertaining to the use and measurement of ionization radiation; and

(d) Radiation biology.

(2) To satisfy the requirement for supervised work experience, training shall be under the supervision of an authorized user and shall include:

(a) Review of the full calibration measurements and periodic quality assurance checks;

(b) Evaluation of prepared treatment plans and calculation of treatment times and patient treatment settings;

(c) Using administrative controls to prevent misadministrations;

(d) Implementing emergency procedures to be followed in the event of the abnormal operation of an external beam radiation therapy unit or console; and

(e) Checking and using radiation survey meters.

(3) To satisfy the requirement for a period of supervised clinical experience, training shall include one year in a formal training program approved by the

residency review committee for radiology of the accreditation council for graduate medical education or the committee on postdoctoral training of the American osteopathic association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user. The supervised clinical experience shall include:

(a) Examining individuals and reviewing their case histories to determine their suitability for external beam radiation therapy treatment, and any limitations or contraindications;

(b) Selecting proper dose and how it is to be administered;

(c) Calculating the external beam radiation therapy doses and collaborating with the authorized user in the review of patients' progress and consideration of the need to modify originally prescribed doses or treatment plans, or both, as warranted by patients' reaction to radiation; and

(d) Postadministration followup and review of case histories.

c. Notwithstanding the requirements of subdivision a or b, the registrant for any therapeutic radiation machine subject to section 33.1-10-15-06 may also submit the training of the prospective authorized user physician for department review on a case-by-case basis.

d. A physician shall not act as an authorized user for any therapeutic radiation machine until such time as said physician's training has been reviewed and approved by the facility and is determined to meet the requirements.

4. Training for radiation therapy physicist. The registrant for any therapeutic radiation machine subject to section 33.1-10-15-06 or 33.1-10-15-07 shall require the radiation therapy physicist to:

a. Be registered with the department, under the provisions of chapter 33.1-10-02, as a provider of radiation services in the area of calibration and compliance surveys of external beam radiation therapy units; and

b. Be certified or eligible for certification by the American board of radiology in:

(1) Therapeutic radiological physics;

(2) Roentgen-ray and gamma-ray physics;

(3) X-ray and radium physics; or

(4) Radiological physics;

c. Be certified or eligible for certification by the American board of medical physics in radiation oncology physics;

d. Be certified or eligible for certification by the Canadian college of medical physics; or

e. Hold a master's or doctor's degree in physics, biophysics, radiological physics, or health physics, and have completed one year of full-time training in therapeutic radiological physics and also one year of full-time work experience under the supervision of a radiation therapy physicist at a medical institution. To meet this requirement, the individual shall have performed the tasks listed in subsection 2 of section 33.1-10-15-04, subsection 16 of section 33.1-10-15-06, subsection 20 of section 33.1-10-15-07, subsection 17 of section 33.1-10-15-06, and subsection 21 of section 33.1-10-15-07 under the supervision of a radiation therapy physicist during the year of work experience.

5. Qualifications of operators.

a. Individuals who will be operating a therapeutic radiation machine for medical use shall be American registry of radiologic technologists (ARRT) registered radiation therapy technologists. Individuals who are not ARRT registered radiation therapy technologists shall submit evidence that they have satisfactorily completed a radiation therapy technologist training program that complies with the requirements of the joint review committee on education in radiologic technology.

b. The names and training of all personnel currently operating a therapeutic radiation machine shall be kept on file at the facility. Information on former operators shall be retained for a period of at least two years beyond the last date they were authorized to operate a therapeutic radiation machine at that facility.

6. Written safety procedures and rules shall be developed by a radiation therapy physicist and shall be available in the control area of a therapeutic radiation machine, including any restrictions required for the safe operation of the particular therapeutic radiation machine. The operator shall be able to demonstrate familiarity with these rules.

7. Individuals shall not be exposed to the useful beam except for medical therapy purposes and unless such exposure has been ordered in writing by a licensed practitioner of the healing arts who meets the requirements of subsection 3. This provision specifically prohibits deliberate exposure of an individual for training, demonstration, or other non-healing-arts purposes.

8. Visiting authorized user. Notwithstanding the provisions of subsection 7, a registrant may permit any physician to act as a visiting authorized user under the term of the registrant's certificate of registration for up to sixty days per calendar year under the following conditions:

a. The visiting authorized user has the prior written permission of the registrant's management and, if the use occurs on behalf of an institution, the institution's radiation safety committee;

b. The visiting authorized user meets the requirements established for authorized users in subdivisions a and b of subsection 3; and

- c. The registrant maintains copies of all records specified by this subsection for five years from the date of the last visit.
- 9. All individuals associated with the operation of a therapeutic radiation machine shall be instructed in and shall comply with the provisions of the registrant's quality management program. In addition to the requirements of this chapter, these individuals are also subject to the requirements of chapter 33.1-10-04.2-01 [10 CFR 20.1203 and 10 CFR 20.1502].
- 10. Information and maintenance record and associated information. The registrant shall maintain the following information in a separate file or package for each therapeutic radiation machine, for inspection by the department:
 - a. Report of acceptance testing;
 - b. Records of all surveys, calibrations, and periodic quality assurance checks of the therapeutic radiation machine required by this chapter, as well as the names of persons who performed such activities;
 - c. Records of maintenance or modifications, or both, performed on the therapeutic radiation machine on or after January 1, 2011, as well as the names of persons who performed such services; and
 - d. Signature of person authorizing the return of therapeutic radiation machine to clinical use after service, repair, or upgrade.
- 11. Records retention. All records required by this chapter shall be retained until disposal is authorized by the department unless another retention period is specifically authorized in this chapter. All required records shall be retained in an active file from at least the time of generation until the next department inspection. Any required record generated prior to the last department inspection may be microfilmed or otherwise archived as long as a complete copy of said record can be retrieved until such time as the department authorizes final disposal.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-04. General technical requirements.

- 1. Protection surveys.
 - a. The registrant shall ensure that radiation protection surveys of all new facilities, and existing facilities not previously surveyed, are performed with an operable radiation measurement survey instrument calibrated in accordance with section 33.1-10-15-08. The radiation protection survey shall be performed by, or under the direction of, a radiation therapy physicist or a qualified expert and shall verify that, with the therapeutic radiation machine in a "BEAM-ON" condition, with the largest clinically available treatment field and with a scattering phantom in the useful beam of radiation:

- (1) Radiation levels in restricted areas are not likely to cause personnel exposures in excess of the limits specified in chapter 33.1-10-04.2-01 [10 CFR 20.1201]; and
- (2) Radiation levels in unrestricted areas do not exceed the limits specified in chapter 33.1-10-04.2-01 [10 CFR 20.1301].
- b. In addition to the requirements of subdivision a, a radiation protection survey shall also be performed prior to any subsequent medical use and:
 - (1) After making any change in the treatment room shielding;
 - (2) After making any change in the location of the therapeutic radiation machine within the treatment room;
 - (3) After relocating the therapeutic radiation machine; or
 - (4) Before using the therapeutic radiation machine in a manner that could result in increased radiation levels in areas outside the external beam radiation therapy treatment room.
- c. The survey record shall indicate all instances where the facility, in the opinion of the radiation therapy physicist or a qualified expert, is in violation of applicable regulations. The survey record shall also include the date of the measurements, the reason the survey is required, the manufacturer's name, model number and serial number of the therapeutic radiation machine, the instruments used to measure radiation levels, a plan of the areas surrounding the treatment room that were surveyed, the measured dose rate at several points in each area expressed in microsieverts or millirems per hour, the calculated maximum level of radiation over a period of one week for each restricted and unrestricted area, and the signature of the individual responsible for conducting the survey;
- d. If the results of the surveys required by subdivision a or b indicate any radiation levels in excess of the respective limit specified in subdivision a, the registrant shall lock the control in the "OFF" position and not use the unit:
 - (1) Except as may be necessary to repair, replace, or test the therapeutic radiation machine, the therapeutic radiation machine shielding, or the treatment room shielding; or
 - (2) Until the registrant has received a specific exemption from the department.
- 2. Modification of radiation therapy unit or room before beginning a treatment program. If the survey required by subsection 1 indicates that an individual in an unrestricted area may be exposed to levels of radiation greater than those permitted by chapter 33.1-10-04.2-01 [10 CFR 20.1301], before beginning the treatment program the registrant shall:
 - a. Either equip the unit with beam direction interlocks or add additional radiation shielding to ensure compliance with chapter 33.1-10-04.2-01 [10 CFR 20.1301];

b. Perform the survey required by subsection 1 again; and

c. Include in the report required by subsection 4 the results of the initial survey, a description of the modification made to comply with subdivision a, and the results of the second survey; or

d. Request and receive a registration amendment under chapter 33.1-10-04.2-01 [10 CFR 20.1301] that authorizes radiation levels in unrestricted areas greater than those permitted by chapter 33.1-10-04.2-01 [10 CFR 20.1301(a) and 10 CFR 20.1301(b)].

3. Dosimetry equipment.

a. The registrant shall have a calibrated dosimetry system available for use. The system shall have been calibrated by the national institute for standards and technology (NIST) or by an American association of physicists in medicine (AAPM) accredited dosimetry calibration laboratory (ADCL). The calibration shall have been performed within the previous twenty-four months and after any servicing that may have affected system calibration. An independent survey shall be conducted by a qualified expert or radiation therapy physicist other than the person performing the original survey prior to the equipment being used except as described in subdivision d of subsection 1.

(1) For beams with energies greater than one million volts (1 Mv) or one million electron volts (1 MeV), the dosimetry system shall have been calibrated for cobalt-60; or

(2) For beams with energies equal to or less than one million volts (1 Mv) or one million electron volts (1 MeV), the dosimetry system shall have been calibrated at an energy appropriate for the radiation being measured;

b. The registrant shall have available for use a dosimetry system for quality assurance check measurements. To meet this requirement, the system may be compared with a system that has been calibrated in accordance with subdivision a. This comparison shall have been performed within the previous twelve months and after each servicing that may have affected system calibration. The quality assurance check system may be the same system used to meet the requirement in subdivision a; and

c. The registrant shall maintain a record of each dosimetry system calibration, intercomparison, and comparison for the duration of the registration. For each calibration, intercomparison, or comparison, the record shall include the date; the model numbers and serial numbers of the instruments that were calibrated, intercompared, or compared as required by subdivisions a and b; the correction factors that were determined; the names of the individuals who performed the calibration, intercomparison, or comparison; and evidence that the intercomparison was performed by, or under the direct supervision and in the physical presence of, a radiation therapy physicist.

4. Reports of external beam radiation therapy surveys and measurements. The registrant for any therapeutic radiation machine subject to section 33.1-10-15-06 or 33.1-10-15-07 shall furnish a copy of the records required in subsections 1 and 2 to the department within thirty days following completion of the action that initiated the record requirement.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-05. Quality management program.

The facility shall implement a quality management program. The facility may use the quality management programs found in either appendix B or C.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-06. Therapeutic radiation machines of less than five hundred kilovolts.

1. Leakage radiation. When the x-ray tube is operated at its maximum rated tube current for the maximum kilovolts, the leakage air kerma rate shall not exceed the value specified at the distance specified for that classification of therapeutic radiation machine:
 - a. Five to fifty kilovolts systems. The leakage air kerma rate measured at any position five centimeters from the tube housing assembly shall not exceed one milligray (100 mrad) in any one hour.
 - b. Greater than fifty and less than five hundred kilovolts systems. The leakage air kerma rate measured at a distance of one meter from the target in any direction shall not exceed one centigray (1 rad) in any one hour. This air kerma rate measurement may be averaged over areas no larger than one hundred square centimeters. In addition, the air kerma rate at a distance of five centimeters from the surface of the tube housing assembly shall not exceed thirty centigray (30 rad) per hour.
 - c. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in subdivisions a and b for the specified operating conditions. Records on leakage radiation measurements shall be maintained at the installation for inspection by the department.
2. Permanent beam-limiting devices. Permanent diaphragms or cones used for limiting the useful beam shall provide at least the same degree of attenuation as required for the tube housing assembly.
3. Adjustable or removable beam-limiting devices.

- a. All adjustable or removable beam-limiting devices, diaphragms, cones, or blocks shall not transmit more than five percent of the useful beam for the most penetrating beam used; and
- b. When adjustable beam-limiting devices are used, the position and shape of the radiation field shall be indicated by a light beam.
- 4. Filter system. The filter system shall be so designed that:
 - a. Filters cannot be accidentally displaced at any possible tube orientation;
 - b. An interlock system prevents irradiation if the proper filter is not in place;
 - c. The air kerma rate escaping from the filter slot shall not exceed one centigray (1 rad) per hour at one meter under any operating conditions; and
 - d. Each filter shall be marked as to its material of construction and its thickness. For wedge filters, the nominal wedge angle shall appear on the wedge or wedge tray, if permanently mounted to the tray.
- 5. Tube immobilization.
 - a. The x-ray tube shall be so mounted that it cannot accidentally turn or slide with respect to the housing aperture; and
 - b. The tube housing assembly shall be capable of being immobilized for stationary portal treatments.
- 6. Source marking. The tube housing assembly shall be so marked that it is possible to determine the location of the source to within five millimeters, and such marking shall be readily accessible for use during calibration procedures.
- 7. Beam block. Contact therapy tube housing assemblies shall have a removable shield of material, equivalent in attenuation to five-tenths millimeters of lead at one hundred kilovolts, which can be positioned over the entire useful beam exit port during periods when the beam is not in use.
- 8. Timer. A suitable irradiation control device shall be provided to terminate the irradiation after a preset time interval.
 - a. A timer with a display shall be provided at the treatment control panel. The timer shall have a preset time selector and an elapsed time or time remaining indicator;
 - b. The timer shall be a cumulative timer that activates with an indication of "BEAM-ON" and retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
 - c. The timer shall terminate irradiation when a preselected time has elapsed, if any dose-monitoring system present has not previously terminated irradiation;

- d. The timer shall permit accurate presetting and determination of exposure times as short as one second;
 - e. The timer shall not permit an exposure if set at zero;
 - f. The timer shall not activate until the shutter is opened when irradiation is controlled by a shutter mechanism unless calibration includes a timer error correction to compensate for mechanical lag; and
 - g. Timer shall be accurate to within one percent of the selected value or one second, whichever is greater.
9. Control panel functions. The control panel, in addition to the displays required by other provisions in this section, shall have:
- a. An indication of whether electrical power is available at the control panel and if activation of the x-ray tube is possible;
 - b. An indication of whether x-rays are being produced;
 - c. A means for indicating x-ray tube potential and current;
 - d. The means for terminating an exposure at any time;
 - e. A locking device which will prevent unauthorized use of the therapeutic radiation machine; and
 - f. A positive display of specific filters in the beam.
10. Multiple tubes. When a control panel may energize more than one x-ray tube:
- a. It shall be possible to activate only one x-ray tube at any time;
 - b. There shall be an indication at the control panel identifying which x-ray tube is activated; and
 - c. There shall be an indication at the tube housing assembly when that tube is energized.
11. Target-to-skin distance (TSD). There shall be a means of determining the central axis target-to-skin distance to within one centimeter and of reproducing this measurement to within two millimeters thereafter.
12. Shutters. Unless it is possible to bring the x-ray output to the prescribed exposure parameters within five seconds after the x-ray "ON" switch is energized, the beam shall be attenuated by a shutter having a lead equivalency not less than that of the tube housing assembly. In addition, after the unit is at operating parameters, the shutter shall be controlled by the operator from the control panel. An indication of shutter position shall appear at the control panel.
13. Low filtration x-ray tubes. Each therapeutic radiation machine equipped with a beryllium or other low-filtration window shall be clearly labeled as such upon the tube housing

assembly and shall be provided with a permanent warning device on the control panel that is activated when no additional filtration is present, to indicate that the dose rate is very high.

14. Facility design requirements for therapeutic radiation machines capable of operating in the range fifty kilovolts to five hundred kilovolts. In addition to shielding adequate to meet requirements of section 33.1-10-15-09, the treatment room shall meet the following design requirements:

a. Aural communication. Provision shall be made for continuous two-way aural communication between the patient and the operator at the control panel.

b. Viewing systems. Provision shall be made to permit continuous observation of the patient during irradiation and the viewing system shall be so located that the operator can observe the patient from the control panel. The therapeutic radiation machine shall not be used for patient irradiation unless at least one viewing system is operational.

15. Additional requirements. Treatment rooms that contain a therapeutic radiation machine capable of operating above one hundred fifty kilovolts shall meet the following additional requirements:

a. All protective barriers shall be fixed except for entrance doors or beam interceptors;

b. The control panel shall be located outside the treatment room or in a totally enclosed booth, which has a ceiling, inside the room;

c. Interlocks shall be provided such that all entrance doors, including doors to any interior booths, shall be closed before treatment can be initiated or continued. If the radiation beam is interrupted by any door opening, it shall not be possible to restore the machine to operation without closing the door and reinitiating irradiation by manual action at the control panel; and

d. When any door referred to in subdivision c is opened while the x-ray tube is activated, the air kerma rate at a distance of one meter from the source shall be reduced to less than one milligray (100 mrad) per hour.

16. Full calibration measurements.

a. Full calibration of a therapeutic radiation machine subject to this section shall be performed by, or under the direct supervision of, a radiation therapy physicist:

(1) Before the first medical use following installation or reinstallation of the therapeutic radiation machine;

(2) At intervals not exceeding one year; and

(3) Before medical use under the following conditions:

- (a) Whenever quality assurance check measurements indicate that the radiation output differs by more than five percent from the value obtained at the last full calibration and the difference cannot be reconciled; and
- (b) Following any component replacement, major repair, or modification of components that could significantly affect the characteristics of the radiation beam.
- (4) Notwithstanding the requirements of paragraph 3:
 - (a) Full calibration of therapeutic radiation machines with multi-energy capabilities is required only for those modes or energies, or both, that are not within their acceptable range; and
 - (b) If the repair, replacement, or modification does not affect all energies, full calibration shall be performed on the affected energy that is in most frequent clinical use at the facility. The remaining energies may be validated with quality assurance check procedures against the criteria in subparagraph a of paragraph 3.
- b. To satisfy the requirement of subdivision a, full calibration shall include all measurements recommended for annual calibration by NCRP report 69, "dosimetry of x-ray and gamma ray beams for radiation therapy in the energy range ten keV to fifty MeV" (1981).
- c. The registrant shall maintain a record of each calibration for the duration of the registration. The record shall include the date of the calibration; the manufacturer's name, model number, and serial number for both the therapeutic radiation machine and the x-ray tube; the model numbers and serial numbers of the instruments used to calibrate the therapeutic radiation machine; and the signature of the radiation therapy physicist responsible for performing the calibration.

17. Periodic quality assurance checks.

- a. Periodic quality assurance checks shall be performed on therapeutic radiation machines subject to this section, which are capable of operation at greater than or equal to fifty kilovolts.
- b. To satisfy the requirement of subdivision a, quality assurance checks shall meet the following requirements:
 - (1) The registrant shall perform quality assurance checks in accordance with written procedures established by the radiation therapy physicist; and
 - (2) The quality assurance check procedures shall specify the frequency at which tests or measurements are to be performed. The quality assurance check procedures shall specify that the quality assurance check shall be performed during the calibration specified in subdivision a of subsection 16. The acceptable tolerance for each parameter measured in the quality assurance

check, when compared to the value for that parameter determined in the calibration specified in subdivision a of subsection 16, shall be stated.

c. The cause for a parameter exceeding a tolerance set by the radiation therapy physicist shall be investigated and corrected before the system is used for patient irradiation.

d. Whenever a quality assurance check indicates a significant change in the operating characteristics of a system, as specified in the radiation therapy physicist's quality assurance check procedures, the system shall be recalibrated as required in subdivision a of subsection 16.

e. The registrant shall use the dosimetry system described in subdivision b of subsection 3 of section 33.1-10-15-04 to make the quality assurance check required in subdivision b.

f. The registrant shall have the radiation therapy physicist review and sign the results of each radiation output quality assurance check within one month of the date that the check was performed.

g. The registrant shall ensure that safety quality assurance checks of therapeutic radiation machines subject to section 33.1-10-15-06 are performed at intervals not to exceed one month.

h. Notwithstanding the requirements of subdivisions f and g, the registrant shall ensure that no therapeutic radiation machine is used to administer radiation to humans unless the quality assurance checks required by subdivisions f and g have been performed within the thirty-day period immediately prior to said administration.

i. To satisfy the requirement of subdivision g, safety quality assurance checks shall ensure proper operation of:

(1) Electrical interlocks at each external beam radiation therapy room entrance;

(2) The "BEAM-ON" and termination switches;

(3) Beam condition indicator lights on the access doors, control console, and in the radiation therapy room;

(4) Viewing systems; and

(5) If applicable, electrically operated treatment room doors from inside and outside the treatment room.

j. The registrant shall maintain a record of each quality assurance check required by subdivision g for three years. The record shall include the date of the quality assurance check; the manufacturer's name, model number, and serial number of the therapeutic radiation machine; the manufacturer's name, model number, and serial number, for the instruments used to measure the radiation output of the therapeutic radiation machine; and the signature of the individual who performed the periodic quality assurance check.

18. Operating procedures.

- a. The therapeutic radiation machine shall not be used for irradiation of patients unless the requirements of subsection 16 of section 33.1-10-15-06 and subsection 17 of this section have been met;
- b. Therapeutic radiation machines shall not be left unattended unless secured pursuant to subdivision e of subsection 9;
- c. When a patient must be held in position for radiation therapy, mechanical supporting or restraining devices shall be used;
- d. The tube housing assembly shall not be held by an individual during operation unless the assembly is designed to require such holding and the peak tube potential of the system does not exceed fifty kilovolts. In such cases, the holder shall wear protective gloves and apron of not less than five-tenths millimeters lead equivalency at one hundred kilovolts;
- e. A copy of the current operating and emergency procedures shall be maintained at the therapeutic radiation machine control console; and
- f. No individual other than the patient shall be in the treatment room during exposures from therapeutic radiation machines operating above one hundred fifty kilovolts. At energies less than or equal to one hundred fifty kilovolts, any individual, other than the patient, in the treatment room shall be protected by a barrier sufficient to meet the requirements of chapter 33.1-10-04.2-01 [10 CFR 20.1201].

19. Possession of survey instruments. Each facility location authorized to use a therapeutic radiation machine in accordance with this section shall possess appropriately calibrated portable monitoring equipment. As a minimum, such equipment shall include a portable radiation measurement survey instrument capable of measuring dose rates over the range ten microsievert (1 mrem) per hour to ten millisievert (1000 mrem) per hour. The survey instruments shall be operable and calibrated in accordance with section 33.1-10-15-08.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-07. Therapeutic radiation machines - Photon therapy systems (five hundred kilovolts and above) and electron therapy systems (five hundred kilo electron volts and above).

1. Possession of survey instruments. Each facility location authorized to use a therapeutic radiation machine in accordance with this section shall possess appropriately calibrated portable monitoring equipment. As a minimum, such equipment shall include a portable radiation measurement survey instrument capable of measuring dose rates over the range of ten microsieverts (1 mrem) per hour to ten millisieverts (1000 mrem) per hour. The survey instruments shall be operable and calibrated in accordance with section 33.1-10-15-08.

2. Leakage radiation outside the maximum useful beam in photon and electron modes.

- a. The absorbed dose due to leakage radiation (excluding neutrons) at any point outside the maximum-sized useful beam, but within a circular plane of radius two meters which is perpendicular to and centered on the central axis of the useful beam at the nominal treatment distance (i.e., patient plane), shall not exceed a maximum of two-tenths percent and an average of one-tenth percent of the absorbed dose on the beam axis at the nominal treatment distance. Measurements shall be averaged over an area not exceeding one hundred square centimeters at a minimum of sixteen points uniformly distributed in the plane;
- b. Except for the area defined in subdivision a, the absorbed dose due to leakage radiation (excluding neutrons) at one meter from the electron path between the electron source and the target or electron window shall not exceed five-tenths percent of the absorbed dose on the central axis of the beam at the nominal treatment distance. Measurements shall be averaged over an area not exceeding one hundred square centimeters;
- c. For equipment manufactured after January 1, 2011, the neutron absorbed dose outside the useful beam shall be in compliance with international electrotechnical commission (IEC) document 601-2-1 (most current revision); and
- d. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the leakage radiation existing at the positions specified in subdivisions a and c for the specified operating conditions. Records on leakage radiation measurements shall be maintained at the installation for inspection by the department.

3. Leakage radiation through beam-limiting devices.

- a. Photon radiation. All adjustable or interchangeable beam-limiting devices shall attenuate the useful beam such that at the nominal treatment distance, the maximum absorbed dose anywhere in the area shielded by the beam-limiting devices shall not exceed two percent of the maximum absorbed dose on the central axis of the useful beam measured in a ten centimeter by ten centimeter radiation field.
- b. Electron radiation. All adjustable or interchangeable electron applicators shall attenuate the radiation, including but not limited to photon radiation generated by electrons incident on the beam-limiting device and electron applicator and other parts of the radiation head, such that the absorbed dose in a plane perpendicular to the central axis of the useful beam at the nominal treatment distance shall not exceed:
 - (1) A maximum of two percent and average of five-tenths percent of the absorbed dose on the central axis of the useful beam at the nominal treatment distance. This limit shall apply beyond a line seven centimeters outside the periphery of the useful beam; and

(2) A maximum of ten percent of the absorbed dose on the central axis of the useful beam at the nominal treatment distance. This limit shall apply beyond a line two centimeters outside the periphery of the useful beam.

c. Measurement of leakage radiation.

(1) Photon radiation. Measurements of leakage radiation through the beam-limiting devices shall be made with the beam-limiting devices closed and any residual aperture blocked by at least two-tenth value layers of suitable absorbing material. In the case of overlapping beam-limiting devices, the leakage radiation through each set shall be measured independently at the depth of maximum dose. Measurements shall be made using a radiation detector of area not exceeding ten square centimeters; and

(2) Electron radiation. Measurements of leakage radiation through the electron applicators shall be made with the electron beam directed into the air and using a radiation detector of area up to but not exceeding one square centimeter suitably protected against radiation which has been scattered from material beyond the radiation detector. Measurements shall be made using one centimeter of water equivalent buildup material.

4. Filters and wedges.

a. Each wedge filter that is removable from the system shall be clearly marked with an identification number. For removable wedge filters, the nominal wedge angle shall appear on the wedge or wedge tray (if permanently mounted to the tray). If the wedge or wedge tray is significantly damaged, the wedge transmission factor shall be redetermined;

b. If the absorbed dose rate information required by subsection 2 relates exclusively to operation with a field-flattening filter or beam-scattering foil in place, such foil or filter shall be removable only by the use of tools; and

c. For equipment which utilizes wedge filters, interchangeable field-flattening filters, or interchangeable beam-scattering foils:

(1) Irradiation shall not be possible until a selection of a filter or a positive selection to use "no filter" has been made at the treatment control panel, either manually or automatically;

(2) An interlock system shall be provided to prevent irradiation if the filter selected is not in the correct position;

(3) A display shall be provided at the treatment control panel showing the wedge filters, interchangeable field-flattening filters, or interchangeable beam-scattering foils, or both, in use; and

(4) An interlock shall be provided to prevent irradiation if any filter or beam-scattering foil selection operation, or both, carried out in the treatment

room does not agree with the filter or beam-scattering foil selection operation, or both, carried out at the treatment control panel.

5. Stray radiation in the useful beam. For equipment manufactured after January 1, 2011, the registrant shall determine during acceptance testing, or obtain from the manufacturer, data sufficient to ensure that x-ray stray radiation, in the useful electron beam, absorbed dose at the surface during x-ray irradiation, and stray neutron radiation in the useful x-ray beam are in compliance with international electrotechnical commission (IEC) document 601-2-1 (most current revision).

6. Beam monitors. All therapeutic radiation machines subject to this section shall be provided with redundant beam-monitoring systems. The sensors for these systems shall be fixed in the useful beam during treatment to indicate the dose monitor unit rate.

a. Equipment shall be provided with at least two independently powered integrating dose meters. Alternatively, common elements may be used if the production of radiation is terminated upon failure of any common element.

b. The detector and the system into which that detector is incorporated shall meet the following requirements:

(1) Each detector shall be removable only with tools and, if movable, shall be interlocked to prevent incorrect positioning;

(2) Each detector shall form part of a beam-monitoring system from whose readings in dose monitor units the absorbed dose at a reference point can be calculated;

(3) Each beam-monitoring system shall be capable of independently monitoring, interrupting, and terminating irradiation; and

(4) The design of the beam-monitoring systems shall ensure that the:

(a) Malfunctioning of one system shall not affect the correct functioning of the other systems; and

(b) Failure of either system shall terminate irradiation or prevent the initiation of radiation; and

(5) Each beam-monitoring system shall have a legible display at the treatment control panel. Each display shall:

(a) Maintain a reading until intentionally reset;

(b) Have only one scale and no electrical or mechanical scale multiplying factors;

(c) Utilize a design such that increasing dose is displayed by increasing numbers; and

(d) In the event of power failure, the beam-monitoring information required in subparagraph c displayed at the control panel at the time of failure shall be retrievable in at least one system for a twenty-minute period of time.

7. Beam symmetry.

- a. Bent-beam linear accelerators subject to this section shall be provided with auxiliary devices to monitor beam symmetry;
- b. The devices referenced in subdivision a shall be able to detect field asymmetry greater than five percent; and
- c. The devices referenced in subdivision a shall be configured to terminate irradiation if the specifications in subdivision b cannot be maintained.

8. Selection and display of dose monitor units.

- a. Irradiation shall not be possible until a new selection of a number of dose monitor units has been made at the treatment control panel;
- b. The preselected number of dose monitor units shall be displayed at the treatment control panel until reset manually for the next irradiation;
- c. After termination of irradiation, it shall be necessary to reset the dosimeter display before subsequent treatment can be initiated; and
- d. After termination of irradiation, it shall be necessary for the operator to reset the preselected dose monitor units before irradiation can be initiated.

9. Air kerma rate or absorbed dose rate. A system shall be provided from whose readings the air kerma rate or absorbed dose rate at a reference point can be calculated. The radiation detectors specified in subsection 6 may form part of this system. In addition:

- a. The dose monitor unit rate shall be displayed at the treatment control panel;
- b. If the equipment can deliver under any conditions an air kerma rate or absorbed dose rate at the nominal treatment distance more than twice the maximum value specified by the manufacturer, a device shall be provided which terminates irradiation when the air kerma rate or absorbed dose rate exceeds a value twice the specified maximum. The dose rate at which the irradiation will be terminated shall be a record maintained by the registrant;
- c. If the equipment can deliver under any fault conditions an air kerma rate or absorbed dose rate at the nominal treatment distance more than ten times the maximum value specified by the manufacturer, a device shall be provided to prevent the air kerma rate or absorbed dose rate anywhere in the radiation field from exceeding twice the specified maximum value and to terminate irradiation if the excess absorbed dose at the nominal treatment distance exceeds four gray (400 rad); and

- d. For each therapeutic radiation machine, the registrant shall determine, or obtain from the manufacturer, the maximum values specified in subdivisions b and c for the specified operating conditions. Records of these maximum values shall be maintained at the installation for inspection by the department.
- 10. Termination of irradiation by the beam-monitoring system or systems during stationary beam radiation therapy.
 - a. Each primary system shall terminate irradiation when the preselected number of dose monitor units has been detected by the system;
 - b. If the original design of the equipment included a secondary dose monitoring system, that system shall be capable of terminating irradiation when not more than fifteen percent or forty dose monitor units above the preselected number of dose monitor units set at the control panel has been detected by the secondary dose monitoring system; and
 - c. An indicator on the control panel shall show which monitoring system has terminated irradiation.
 - d. For new equipment, a secondary dose monitoring system must be present. That system must be capable of terminating irradiation when not more than ten percent or twenty-five dose monitoring units above the preselected number of dose monitor units set at the control panel has been detected by the secondary dose monitoring system.
- 11. Termination of irradiation. It shall be possible to terminate irradiation and equipment movement or go from an interruption condition to termination condition at any time from the operator's position at the treatment control panel.
- 12. Interruption of irradiation. It shall be possible to interrupt irradiation and equipment movements at any time from the treatment control panel. Following an interruption it shall be possible to restart irradiation by operator action without any reselection of operating conditions. If any change is made of a preselected value during an interruption, irradiation and equipment movements shall be automatically terminated.
- 13. Timer. A suitable irradiation control device shall be provided to terminate the irradiation after a preset time interval.
 - a. A timer shall be provided which has a display at the treatment control panel. The timer shall have a preset time selector and an elapsed time indicator;
 - b. The timer shall be a cumulative timer that activates with an indication of "BEAM-ON" and retains its reading after irradiation is interrupted or terminated. After irradiation is terminated and before irradiation can be reinitiated, it shall be necessary to reset the elapsed time indicator;
 - c. After termination of irradiation and before irradiation can be reinitiated, it shall be necessary to reset the preset time selector; and

d. The timer shall terminate irradiation when a preselected time has elapsed, if the dose monitoring systems have not previously terminated irradiation.

14. Selection of radiation type. Equipment capable of both x-ray therapy and electron therapy shall meet the following additional requirements:

a. Irradiation shall not be possible until a selection of radiation type (x-rays or electrons) has been made at the treatment control panel;

b. The radiation type selected shall be displayed at the treatment control panel before and during irradiation;

c. An interlock system shall be provided to ensure that the equipment can principally emit only the radiation type that has been selected;

d. An interlock system shall be provided to prevent irradiation with x-rays, except to obtain an image, when electron applicators are fitted;

e. An interlock system shall be provided to prevent irradiation with electrons when accessories specific for x-ray therapy are fitted; and

f. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel.

15. Selection of energy. Equipment capable of generating radiation beams of different energies shall meet the following requirements:

a. Irradiation shall not be possible until a selection of energy has been made at the treatment control panel;

b. An interlock system shall be provided to prevent irradiation if any selected operations carried out in the treatment room do not agree with the selected operations carried out at the treatment control panel;

c. The nominal energy value selected shall be displayed at the treatment control panel until reset manually for the next irradiation. After termination of irradiation, it shall be necessary to reset the nominal energy value selected before subsequent treatment can be initiated;

d. Irradiation shall not be possible until the appropriate flattening filter or scattering foil for the selected energy is in its proper location;

e. An interlock system shall be provided to terminate irradiation if the energy of the electrons striking the x-ray target or electron window deviates by more than twenty percent or three megaelectron volts, whichever is smaller, from the selected nominal energy; and

f. For equipment manufactured after January 1, 2011, the selection of energy shall be in compliance with international electrotechnical commission (IEC) document 601-2-1 (most current revision).

16. Selection of stationary beam radiation therapy or moving beam radiation therapy. Therapeutic radiation machines capable of both stationary beam radiation therapy and moving beam radiation therapy shall meet the following requirements:

a. Irradiation shall not be possible until a selection of stationary beam radiation therapy or moving beam radiation therapy has been made at the treatment control panel;

b. The mode of operation shall be displayed at the treatment control panel;

c. An interlock system shall be provided to ensure that the equipment can operate only in the mode that has been selected;

d. An interlock system shall be provided to prevent irradiation if any selected parameter in the treatment room does not agree with the selected parameter at the treatment control panel;

e. Moving beam radiation therapy shall be controlled to obtain the selected relationships between incremental dose monitor units and incremental movement.

(1) An interlock system shall be provided to terminate irradiation if the number of dose monitor units delivered in any ten degrees of rotation or one cm of linear motion differs by more than twenty percent from the selected value;

(2) Where the angle terminates the irradiation in moving beam radiation therapy, the dose monitor units delivered shall differ by less than five percent from the dose monitor unit value selected;

(3) An interlock shall be provided to prevent motion of more than five degrees or one cm beyond the selected limits during moving beam radiation therapy; and

(4) An interlock shall be provided to require that a selection of direction be made at the treatment control panel in all units which are capable of both clockwise and counterclockwise moving beam radiation therapy; and

(5) Moving beam radiation therapy shall be controlled with both primary position sensors and secondary position sensors to obtain the selected relationships between incremental dose monitor units and incremental movement;

f. Where the beam monitor system terminates the irradiation in moving beam radiation therapy, the termination of irradiation shall be as required by subsection 10; and

g. An interlock system shall be provided to terminate irradiation if movement:

(1) Occurs during stationary beam radiation therapy; or

(2) Does not start or stops during moving beam radiation therapy unless such stoppage is a preplanned function.

17. Facility design requirements for therapeutic radiation machines operating above five hundred kilovolts. In addition to shielding adequate to meet requirements of section 33.1-10-15-09, the following design requirements are made:

a. Protective barriers. All protective barriers shall be fixed, except for access doors to the treatment room or movable beam interceptors;

b. Control panel. In addition to other requirements specified in this chapter, the control panel shall also:

(1) Be located outside the treatment room;

(2) Provide an indication of whether electrical power is available at the control panel and if activation of the radiation is possible;

(3) Provide an indication of whether radiation is being produced; and

(4) Include an access control (locking) device that will prevent unauthorized use of the therapeutic radiation machine;

c. Viewing systems. Windows, mirrors, closed-circuit television, or an equivalent viewing system shall be provided to permit continuous observation of the patient following positioning and during irradiation and shall be so located that the operator may observe the patient from the treatment control panel. The therapeutic radiation machine shall not be used for patient irradiation unless at least one viewing system is operational;

d. Aural communications. Provision shall be made for continuous two-way aural communication between the patient and the operator at the control panel. The therapeutic radiation machine shall not be used for irradiation of patients unless continuous two-way aural communication is possible;

e. Room entrances. Treatment room entrances shall be provided with warning lights in a readily observable position near the outside of all access doors, which will indicate when the useful beam is "ON" and when it is "OFF";

f. Entrance interlocks. Interlocks shall be provided such that all access controls are activated before treatment can be initiated or continued. If the radiation beam is interrupted by any access control, it shall not be possible to restore the machine to operation without resetting the access control and reinitiating irradiation by manual action at the control panel;

g. Beam interceptor interlocks. If the shielding material in any protective barrier requires the presence of a beam interceptor to ensure compliance with subdivisions 33.1-10-04.2-01 [10 CFR 20.1301a] and 33.1-10-04.2-01 [10 CFR 20.1301b] of these regulations, interlocks shall be provided to prevent the production of radiation, unless the beam interceptor is in place, whenever the useful beam is directed at the designated barriers;

h. Emergency cutoff switches. At least one emergency power cutoff switch shall be located in the radiation therapy room and shall terminate all equipment electrical power, including radiation and mechanical motion. This switch is in addition to the termination switch required by subsection 11. All emergency power cutoff switches shall include a manual reset so that the therapeutic radiation machine cannot be restarted from the unit's control console without resetting the emergency cutoff switch;

i. Safety interlocks. All safety interlocks shall be designed so that any defect or component failure in the safety interlock system prevents or terminates operation of the therapeutic radiation machine; and

j. Surveys for residual radiation. Surveys for residual activity shall be conducted on all therapeutic radiation machines capable of generating photon and electron energies above ten million volts prior to machining, removing, or working on therapeutic radiation machine components which may have become activated due to photo-neutron production.

18. Radiation therapy physicist support.

a. The services of a radiation therapy physicist shall be required in facilities having therapeutic radiation machines with energies of five hundred kilovolts and above. The radiation therapy physicist shall be responsible for:

(1) Full calibrations required by subsection 20 and protection surveys required by subsection 1 of section 33.1-10-15-04;

(2) Supervision and review of dosimetry;

(3) Beam data acquisition and transfer for computerized dosimetry, and supervision of its use;

(4) Quality assurance, including quality assurance check review required by subdivision e of section 21;

(5) Consultation with the authorized user in treatment planning, as needed; and

(6) Perform calculations and assessments regarding misadministrations.

b. If the radiation therapy physicist is not a full-time employee of the registrant, the operating procedures required by subsection 17 shall also specifically address how the radiation therapy physicist is to be contacted for problems or emergencies, as well as the specific actions, if any, to be taken until the radiation therapy physicist can be contacted.

19. Operating procedures.

a. No individual, other than the patient, shall be in the treatment room during treatment or during any irradiation for testing or calibration purposes;

- b. Therapeutic radiation machines shall not be made available for medical use unless the requirements of subsection 1 of section 33.1-10-15-04 and subsections 20 and 21 of this section have been met;
- c. Therapeutic radiation machines, when not in operation, shall be secured to prevent unauthorized use;
- d. When adjustable beam-limiting devices are used, the position and shape of the radiation field shall be indicated by a light field;
- e. If a patient must be held in position during treatment, mechanical supporting or restraining devices shall be used; and
- f. A copy of the current operating and emergency procedures shall be maintained at the therapeutic radiation machine control console.

20. Acceptance testing, commissioning, and full calibration measurements.

- a. Acceptance testing, commissioning, and full calibration of a therapeutic radiation machine subject to this section shall be performed by, or under the direct supervision of, a radiation therapy physicist.
- b. Acceptance testing and commissioning shall be performed in accordance with "American association of physicists in medicine code of practice for radiotherapy accelerators: report of American association of physicists in medicine radiation therapy task group 45" and shall be conducted before the first medical use following installation or reinstallation of the therapeutic radiation machine.
- c. Full calibration shall include measurement of all parameters required by table II of "comprehensive QA for radiation oncology: report of American association of physicists in medicine radiation therapy committee task group 40" and shall be performed in accordance with "American association of physicists in medicine code of practice for radiotherapy accelerators: report of American association of physicists in medicine radiation therapy task group 45". Although it shall not be necessary to complete all elements of a full calibration at the same time, all parameters (for all energies) shall be completed at intervals not exceeding twelve calendar months, unless a more frequent interval is required in table II.
- d. The radiation therapy physicist shall perform all elements of a full calibration necessary to determine that all parameters are within acceptable limits:
 - (1) Whenever quality assurance check measurements indicate that the radiation output differs by more than five percent from the value obtained at the last full calibration and the difference cannot be reconciled. Therapeutic radiation machines with multi-energy or multimode capabilities, or both, shall only require measurements for those modes or energies, or both, which are not within their acceptable range; and
 - (2) Following any component replacement, major repair, or modification of components that could significantly affect the characteristics of the radiation

beam. If the repair, replacement, or modification does not affect all modes or energies, measurements shall be performed on the affected mode or energy that is in most frequent clinical use at the facility. The remaining energies or modes may be validated with quality assurance check procedures against the criteria in paragraph 1 .

- e. The registrant shall maintain a record of each calibration in an auditable form for the duration of the registration. The record shall include the date of the calibration; the manufacturer's name, model number, and serial number for the therapeutic radiation machine; the model numbers and serial numbers of the instruments used to calibrate the therapeutic radiation machine; and the signature of the radiation therapy physicist responsible for performing the calibration.

21. Periodic quality assurance checks.

- a. Periodic quality assurance checks shall be performed on all therapeutic radiation machines subject to this section at intervals not to exceed those specified in "comprehensive QA for radiation oncology: report of American association of physicists in medicine radiation therapy committee task group 40";
- b. To satisfy the requirement of subdivision a, quality assurance checks shall include determination of central axis radiation output and a representative sampling of periodic quality assurance checks contained in "comprehensive QA for radiation oncology: report of American association of physicists in medicine radiation therapy committee task group 40". Representative sampling shall include all referenced periodic quality assurance checks in an interval not to exceed twelve consecutive calendar months;
- c. The registrant shall use a dosimetry system that has been intercompared within the previous twelve months with the dosimetry system described in subdivision a of subsection 3 of section 33.1-10-15-04 to make the periodic quality assurance checks required in subdivision b;
- d. The registrant shall perform periodic quality assurance checks required by subdivision a in accordance with procedures established by the radiation therapy physicist;
- e. The registrant shall review the results of each periodic radiation output check according to the following procedures:
 - (1) The authorized user and radiation therapy physicist shall be immediately notified if any parameter is not within its acceptable tolerance. The therapeutic radiation machine shall not be made available for subsequent medical use until the radiation therapy physicist has determined that all parameters are within their acceptable tolerances;
 - (2) If all quality assurance check parameters appear to be within their acceptable range, the quality assurance check shall be reviewed and signed by either the authorized user or radiation therapy physicist within three treatment days; and

- (3) The radiation therapy physicist shall review and sign the results of each radiation output quality assurance check at intervals not to exceed one month;
- f. Therapeutic radiation machines subject to this section shall have safety quality assurance checks listed in "comprehensive QA for radiation oncology: report of American association of physicists in medicine radiation therapy committee task group 40" performed at intervals not to exceed one week;
- g. To satisfy the requirement of subdivision e, safety quality assurance checks shall ensure proper operation of:
- (1) Electrical interlocks at each external beam radiation therapy room entrance;
 - (2) Proper operation of the "BEAM-ON", interrupt, and termination switches;
 - (3) Beam condition indicator lights on the access doors, on the control console, and in the radiation therapy room;
 - (4) Viewing systems;
 - (5) Electrically operated treatment room doors from inside and outside the treatment room; and
 - (6) At least one emergency power cutoff switch. If more than one emergency power cutoff switch is installed and not all switches are tested at once, each switch shall be tested on a rotating basis. Safety quality assurance checks of the emergency power cutoff switches may be conducted at the end of the treatment day in order to minimize possible stability problems with the therapeutic radiation machine;
- h. The registrant shall promptly repair any system identified in subdivision g that is not operating properly; and
- i. The registrant shall maintain a record of each quality assurance check required by subdivisions a and b for three years. The record shall include the date of the quality assurance check; the manufacturer's name, model number, and serial number of the therapeutic radiation machine; the manufacturer's name, model number, and serial number for the instruments used to measure the radiation output of the therapeutic radiation machine; and the signature of the individual who performed the periodic quality assurance check.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-08. Calibration of survey instruments.

1. The registrant shall ensure that the survey instruments used to show compliance with this chapter have been calibrated before first use, at intervals not to exceed twelve months, and following repair;

2. To satisfy the requirements of subsection 1, the registrant shall:

- a. Calibrate all required scale readings up to ten millisieverts (1000 mrem) per hour with an appropriate radiation source that is traceable to the national institute of standards and technology (NIST); and
- b. Calibrate at least two points on each scale to be calibrated. These points should be at approximately one-third and two-thirds of full scale;

3. To satisfy the requirements of subsection 2, the registrant shall:

- a. Consider a point as calibrated if the indicated dose rate differs from the calculated dose rate by not more than ten percent; and
- b. Consider a point as calibrated if the indicated dose rate differs from the calculated dose rate by not more than twenty percent if a correction factor or graph is conspicuously attached to the instrument;

4. The registrant shall retain a record of each calibration required in subsection 1 for three years. The record shall include:

- a. A description of the calibration procedure; and
- b. A description of the source used and the certified dose rates from the source, and the rates indicated by the instrument being calibrated, the correction factors deduced from the calibration data, the signature of the individual who performed the calibration, and the date of calibration; and

5. The registrant may obtain the services of individuals registered by the department, or licensed by the United States nuclear regulatory commission, an agreement state, or a licensing state to perform calibrations of survey instruments. Records of calibrations that contain information required by subsection 4 shall be maintained by the registrant.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

33.1-10-15-09. Shielding and safety design requirements.

1. Each therapeutic radiation machine subject to section 33.1-10-15-06 or 33.1-10-15-07 shall be provided with such primary or secondary barriers, or both, as are necessary to ensure compliance with subsection 33.1-10-04.2-01 [10 CFR 20.1201] and 33.1-10-04.2 [10 CFR 20.1301].

2. Facility design information for all new installations of a therapeutic radiation machine or installations of a therapeutic radiation machine of higher energy into a room not previously approved for that energy shall be submitted for department approval prior to actual installation of the therapeutic radiation machine. The minimum facility design information that must be submitted is contained in appendix A.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-02; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-03-03; S.L. 2017, ch. 199, § 18

APPENDIX A

INFORMATION ON RADIATION SHIELDING REQUIRED FOR PLAN REVIEWS

1. All therapeutic radiation machines.

- a. Basic facility information, including name, telephone number, and department registration number of the individual responsible for preparation of the shielding plan; name and telephone number of the facility supervisor; and the street address (including room number) of the therapeutic radiation machine facility. The plan should also indicate whether this is a new structure or a modification to existing structures.
- b. All wall, floor, and ceiling areas struck by the useful beam shall have primary barriers.
- c. Secondary barriers shall be provided in all wall, floor, and ceiling areas not having primary barriers.

2. Therapeutic radiation machines up to 150 Kv (photons only). In addition to the requirements listed in subsection 1, therapeutic radiation machine facilities which produce only photons with a maximum energy less than or equal to 150 kilovolts shall submit shielding plans which contain, as a minimum, the following additional information:

- a. Equipment specifications, including the manufacturer and model number of the therapeutic radiation machine, as well as the maximum technique factors;
- b. Maximum design workload for the facility, including total weekly radiation output, (expressed in gray (rad) or air kerma at 1 meter), total beam-on time per day or week, the average treatment time per patient, along with the anticipated number of patients to be treated per day or week;
- c. A facility blueprint or drawing indicating: scale (0.25 inch = 1 foot is typical); direction of north; normal location of the therapeutic radiation machine's radiation ports; the port's travel and traverse limits; general directions of the useful beam; locations of any windows and doors; and the location of the therapeutic radiation machine control panel. If the control panel is located inside the therapeutic radiation machine treatment room, the location of the operator's booth shall be noted on the plan and the operator's station at the control panel shall be behind a protective barrier sufficient to ensure compliance with subsection 1 of section 33.1-10-04.2-06 [10 CFR 20.1201] of these regulations;
- d. The structural composition and thickness or lead or concrete equivalent of all walls, doors, partitions, floor, and ceiling of the rooms concerned;
- e. The type of occupancy of all adjacent areas inclusive of space above and below the rooms concerned. If there is an exterior wall, showing distance to the closest areas where it is likely that individuals may be present; and

f. At least one example calculation which shows the methodology used to determine the amount of shielding required for each physical condition (i.e., primary and secondary leakage barriers, restricted and unrestricted areas, entry doors) and shielding material in the facility:

(1) If commercial software is used to generate shielding requirements, please also identify the software used and the version or revision date.

(2) If the software used to generate shielding requirements is not in the open literature, please also submit quality control sample calculations to verify the result obtained with the software.

3. Therapeutic radiation machines over 150 kilovolts.

In addition to the requirements listed in subsection 1, therapeutic radiation machine facilities that produce photons with a maximum energy in excess of 150 kilovolts or electrons shall submit shielding plans which contain, as a minimum, the following additional information:

a. Equipment specifications, including the manufacturer and model number of the therapeutic radiation machine, and gray (rad) at the isocenter and the energies and types of radiation produced (i.e., photon, electron). The target to isocenter distance shall be specified;

b. Maximum design workload for the facility, including total weekly radiation output (expressed in gray (rad) at 1 meter), total beam-on time per day or week, the average treatment time per patient, along with the anticipated number of patients to be treated per day or week;

c. Facility blueprint or drawing (including both floor plan and elevation view) indicating relative orientation of the therapeutic radiation machine, scale (0.25 inch = 1 foot is typical), types, thickness, and minimum density of shielding materials, direction of north, the locations and size of all penetrations through each shielding barrier (ceiling, walls, and floor), as well as details of the doors and maze;

d. The structural composition and thickness or concrete equivalent of all walls, doors, partitions, floor, and ceiling of the rooms concerned;

e. The type of occupancy of all adjacent areas inclusive of space above and below the rooms concerned. If there is an exterior wall, showing distance to the closest areas where it is likely that individuals may be present;

f. Description of all assumptions that were in shielding calculations including design energy (i.e., room may be designed for 6 MV unit although only a 4 MV unit is currently proposed), work-load, presence of integral beam-stop in unit, occupancy and uses of adjacent areas, fraction of time that useful beam will intercept each permanent barrier (walls, floor, and ceiling), and "allowed" radiation exposure in both restricted and unrestricted areas; and

g. At least one example calculation which shows the methodology used to determine the amount of shielding required for each physical condition (i.e., primary and secondary or leakage barriers, restricted and unrestricted areas, small angle scatter, entry doors and maze) and shielding material in the facility:

(1) If commercial software is used to generate shielding requirements, also identify the software used and the version or revision date; and

(2) If the software used to generate shielding requirements is not in the open literature, also submit quality control sample calculations to verify the result obtained with the software.

4. Neutron shielding.

In addition to the requirements listed in subsection 3, therapeutic radiation machine facilities that are capable of operating above 10 MV shall submit shielding plans which contain, as a minimum, the following additional information:

a. The structural composition, thickness, minimum density, and location of all neutron shielding material;

b. Description of all assumptions that were used in neutron shielding calculations, including neutron spectra as a function of energy, neutron fluence rate, absorbed dose, and dose equivalent (due to neutrons) in both restricted and unrestricted areas;

c. At least one example calculation which shows the methodology used to determine the amount of neutron shielding required for each physical condition (i.e., restricted and unrestricted areas, entry doors and maze) and neutron shielding material utilized in the facility:

(1) If commercial software is used to generate shielding requirements, also identify the software used and the version or revision date; and

(2) If the software used to generate shielding requirements is not in the open literature, also submit quality control sample calculations to verify the result obtained with the software.

d. The methods and instrumentation that will be used to verify the adequacy of all neutron shielding installed in the facility.

5. References.

a. NCRP Report 147, "Structural Shielding Design and Evaluation for Medical Use of X-Rays and Gamma Rays of Energies Up to 10 MeV" (2004).

b. NCRP Report 144, "Radiation Protection Design Guidelines for 0.1-100 MeV Particle Accelerator Facilities" (2003).

c. NCRP Report 79, "Neutron Contamination from Medical Electron Accelerators" (1984).

History: Effective _____, 2018.

APPENDIX B

QUALITY MANAGEMENT PROGRAM

1. In addition to the definitions in section 33.1-10-15-02, the following definitions are applicable to this appendix B:

a. "Misadministration" means the administration of an external beam radiation therapy dose:

(1) Involving the wrong patient, wrong treatment modality, or wrong treatment site;

(2) When the treatment consists of three or fewer fractions and the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(3) When the calculated weekly administered dose differs from the weekly prescribed dose by more than thirty percent; or

(4) When the calculated total administered dose differs from the total prescribed dose by more than twenty percent of the total prescribed dose.

b. "Prescribed dose" means the total dose and dose per fraction as documented in the written directive. The prescribed dose is an estimation from measured data from a specified therapeutic radiation machine using assumptions that are clinically acceptable for that treatment technique and historically consistent with the clinical calculations previously used for patients treated with the same clinical technique.

c. "Recordable event" means the administration of an external beam radiation therapy dose when the calculated weekly administered dose differs by fifteen percent or more from the weekly prescribed dose.

d. "Written directive" means an order in writing for a specific patient, dated and signed by an authorized user prior to the administration of radiation, containing the following information: total dose, dose per fraction, treatment site, and overall treatment period.

2. Scope and applicability. Each applicant or registrant subject to section 33.1-10-15-06 or 33.1-10-15-07 shall establish and maintain a written quality management program to provide high confidence that radiation will be administered as directed by the authorized user. The quality management program shall include written policies and procedures to meet the following specific objectives:

a. Prior to administration, a written directive is prepared for any external beam radiation therapy dose;

(1) Notwithstanding subdivision a, a written revision to an existing written directive may be made provided that the revision is dated and signed by an authorized user prior to administration of the external beam radiation therapy dose or the next external beam radiation therapy fractional dose;

(2) Notwithstanding subdivision a, if, because of the patient's condition, a delay in order to provide a written revision to an existing written directive would jeopardize the patient's health, an oral revision to an existing written directive shall be acceptable, provided that the oral revision is documented immediately in the patient's record and a revised written directive is signed by an authorized user within 48 hours of the oral revision; and

(3) Notwithstanding subdivision a, if, because of the emergent nature of the patient's condition, a delay in order to provide a written directive would jeopardize the patient's health, an oral directive shall be acceptable, provided that the information contained in the oral directive is documented immediately in the patient's record and a written directive is prepared and signed by an authorized user within twenty-four hours of the oral directive;

b. Prior to the administration of each course of radiation treatments, the patient's identity is verified, by more than one method, as the individual named in the written directive;

c. External beam radiation therapy final plans of treatment and related calculations are in accordance with the respective written directives;

d. Each administration is in accordance with the written directive; and

e. Any unintended deviation from the written directive is identified and evaluated, and appropriate action is taken.

3. Development of quality management program.

a. Each application for registration subject to section 33.1-10-15-06 or 33.1-10-15-07 shall include a quality management program, that specifies staff, duties, and responsibilities, and equipment and procedures as part of the application required by chapter 33.1-10-02. The registrant shall implement the program upon issuance of a certificate of registration by the department; and

b. Each existing registrant subject to section 33.1-10-15-06 or 33.1-10-15-07 shall, within thirty days of January 1, 2011, submit to the department a written certification that a quality management program has been implemented.

4. As a part of the quality management program, the registrant shall:

a. Develop procedures for, and conduct a review of, the quality management program, including since the last review, an evaluation of a representative sample of patient administrations, all recordable events, and all misadministrations to verify compliance with all aspects of the quality management program;

b. Conduct these reviews at intervals not to exceed twelve months;

c. Evaluate each of these reviews to determine the effectiveness of the quality management program and, if required, make modifications to meet the requirements of subsection 2; and

- d. Maintain records of each review, including the evaluations and findings of the review, in an auditable form, for three years.
- 5. The registrant shall evaluate and respond, within thirty days after discovery of the recordable event, to each recordable event by:
 - a. Assembling the relevant facts, including the cause;
 - b. Identifying what, if any, corrective action is required to prevent recurrence; and
 - c. Retaining a record, in an auditable form, for three years, of the relevant facts and what corrective action, if any, was taken.
- 6. The registrant shall retain:
 - a. Each written directive; and
 - b. A record of each administered radiation dose, in an auditable form, for three years after the date of administration.
- 7. The registrant may make modifications to the quality management program to increase the program's efficiency provided the program's effectiveness is not decreased.
- 8. The registrant shall evaluate each misadministration and shall take the following actions in response to a misadministration:
 - a. Notify the department by telephone no later than the next calendar day after discovery of the misadministration;
 - b. Submit a written report to the department within fifteen days after discovery of the misadministration. The written report shall include the registrant's name; the prescribing physician's name; a brief description of the event; why the event occurred; the effect on the patient; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the registrant notified the patient or the patient's responsible relative or guardian (this person will subsequently be referred to as "the patient"), and if not, why not, and if the patient was notified, what information was provided to the patient. The report shall not include the patient's name or other information that could lead to identification of the patient;
 - c. Notify the referring physician and also notify the patient of the misadministration no later than twenty-four hours after its discovery, unless the referring physician personally informs the registrant either that he/she will inform the patient or that, based on medical judgment, telling the patient would be harmful. The registrant is not required to notify the patient without first consulting with the referring physician. If the referring physician or patient cannot be reached within twenty-four hours, the registrant shall notify the patient as soon as possible. The registrant shall not delay any appropriate medical care for the patient, including any necessary remedial care as a result of the misadministration, because of any delay in notification;

d. Retain a record of each misadministration for five years. The record shall contain the names of all individuals involved (including the prescribing physician, allied health personnel, the patient, and the patient's referring physician), the patient's social security number or identification number if one has been assigned, a brief description of the event, why it occurred, the effect on the patient, what improvements are needed to prevent recurrence, and the actions taken to prevent recurrence; and

e. If the patient was notified, furnish, within fifteen days after discovery of the misadministration, a written report to the patient by sending either a copy of the report that was submitted to the department, or a brief description of both the event and the consequences as they may effect the patient, provided a statement is included that the report submitted to the department can be obtained from the registrant.

9. Aside from the notification requirement, nothing in subsection 8 of section 33.1-10-15-05 affects any rights or duties of registrants and physicians in relation to each other, patients, or the patient's responsible relatives or guardians.

History: Effective _____, 2018.

APPENDIX C

ALTERNATIVE QUALITY MANAGEMENT PROGRAM

1. In addition to the definitions in section 33.1-10-15-02, the following definitions are applicable to this appendix C:

a. "Misadministration" means the administration of an external beam radiation therapy dose:

(1) Involving the wrong patient, wrong treatment modality, or wrong treatment site;

(2) When the treatment consists of three or fewer fractions and the calculated total administered dose differs from the total prescribed dose by more than ten percent of the total prescribed dose;

(3) When the calculated weekly administered dose differs from the weekly prescribed dose by more than thirty percent; or

(4) When the calculated total administered dose differs from the total prescribed dose by more than twenty percent of the total prescribed dose;

b. "Recordable event" means the administration of an external beam radiation therapy dose when the calculated weekly administered dose differs by fifteen percent or more from the weekly prescribed dose; and

c. "Written directive" means an order in writing for a specific patient, dated and signed by an authorized user prior to the administration of radiation, containing the following information: total dose, dose per fraction, treatment site, and overall treatment period.

2. Each registrant shall establish and maintain a written program to provide assurance that radiation is administered to humans as directed by the authorized user. The program shall include the following elements:

a. Procedure for preparing written directives for the administration of radiation, however, a written directive is not required when an authorized user personally administers a dosage provided the pertinent facts are documented as otherwise required;

b. Procedure for verifying by more than one method the identity of the individual to be administered radiation;

c. Procedure for updating the therapy operating and emergency procedures manual;

d. Procedure for verifying that final plans of treatment and related calculations for brachytherapy, teletherapy, and gamma stereotactic radiosurgery are in accordance with the respective written directives;

e. Procedures assuring that administration of radiation is carried out as specified in the written directive or the therapy operating and emergency procedures manual; and

f. Procedures for identifying and evaluating unintended deviations from the written directive or the therapy operating and emergency procedures manual including taking appropriate action for recordable events and misadministrations.

3. Each registrant shall evaluate each misadministration and shall take the following actions in response to a misadministration:

a. Notify the department by telephone no later than the next calendar day after discovery of the misadministration;

b. Submit a written report to the department within fifteen days after discovery of the misadministration. The written report shall include the registrant's name; the prescribing physician's name; a brief description of the event; why the event occurred; the effect on the patient; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the registrant notified the patient or the patient's responsible relative or guardian (this person will subsequently be referred to as "the patient"), and if not, why not, and if the patient was notified, what information was provided to the patient. The report shall not include the patient's name or other information that could lead to identification of the patient;

c. Notify the referring physician and also notify the patient of the misadministration no later than twenty-four hours after its discovery, unless the referring physician personally informs the registrant either that the physician will inform the patient or that, based on medical judgment, telling the patient would be harmful. The registrant is not required to notify the patient without first consulting with the referring physician. If the referring physician or patient cannot be reached within twenty-four hours, the registrant shall notify the patient as soon as possible. The registrant shall not delay any appropriate medical care for the patient, including any necessary medical care as a result of the misadministrations, because of any delay in notification;

d. Retain a record of each misadministration for five years. The record shall contain the names of all individuals involved (including the prescribing physician, allied health personnel, the patient, and the patient's referring physician), the patient's social security number or identification number if one has been assigned, a brief description of the event, why it occurred, the effect on the patient, what improvements are needed to prevent recurrence, and the action taken to prevent recurrence; and

e. If the patient was notified, furnish, within fifteen days after discovery of the misadministration, a written report to the patient by sending either a copy of the report that was submitted to the department, or a brief description or both the event and the consequences as they may affect the report submitted to the department can be obtained from the registrant.

4. Each registrant shall evaluate and respond to recordable events within thirty days after discovery by assembling the relevant facts, identifying the cause of the recordable event, and taking appropriate action, if any is required, to prevent recurrence.
5. Each registrant shall conduct an annual evaluation of the human administration program, including any recommendations for changes to be made as well as any modifications made since the last evaluation and, if required, revise procedures to assure that the radiation is administered as directed by the authorized user. Modifications made to the program shall not decrease the effectiveness of the program.
6. Each registrant shall retain, in auditable form, for three years:
 - a. Each written directive;
 - b. A record of each administered radiation dose where a written directive is required;
 - c. A record of each annual review of the program, including the evaluations and findings of the review; and
 - d. A record of each recordable event, the relevant facts, and any corrective actions taken.

History: Effective _____, 2018.

CHAPTER 33.1-10-16 **DOMESTIC LICENSING OF SOURCE MATERIAL**

Section

33.1-10-16-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations
Part 40

33.1-10-16-01. Adoption by reference of several sections in 10 Code of Federal Regulations, part 40.

10 Code of Federal Regulations 40.1, 40.2, 40.3, 40.4, 40.7, 40.9, 40.10, 40.11, 40.12, 40.13, 40.14, 40.20, 40.21, 40.22, 40.25, 40.26, 40.31, 40.32, 40.34, 40.35, 40.36, 40.41, 40.42, 40.43, 40.44, 40.45, 40.46, 40.51, 40.54, 40.55, 40.60, 40.61, 40.62, 40.63, 40.65, and 40.71 and appendix A to part 40 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations 40.12(b); 40.31(j), (k), and (l); 40.32(d), (e), and (g); 40.41(d), (e)(1), (e)(3), and (g); 40.51(b)(6); appendix A, criterion 11A through F and criterion 12; paragraph (2) of the definition of "commencement of construction"; and paragraph (9)(ii) of the definition of "construction".
2. Requirements in 10 Code of Federal Regulations part 40 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", "NRC regional administrator", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations part 40, substitute

the words "department of environmental quality" except when used in 10 Code of Federal Regulations 40.11.

4. 10 Code of Federal Regulations part 40 employee protection also applies to violations of North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
6. North Dakota state form number 8414, "notice to employees", must be posted instead of NRC form 3 that is specified in 10 Code of Federal Regulations part 40.
7. North Dakota state form number 16092, "registration certificate: use of depleted uranium under general license", must be used instead of nuclear regulatory commission form 244 that is specified in 10 Code of Federal Regulations part 40.
8. North Dakota state form number 8418, "application for radioactive material license", must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations part 40.
9. North Dakota state form number 18941, "certificate: disposition of radioactive material", must be used instead of NRC form 314 as specified in 10 Code of Federal Regulations part 40.
10. For references to 10 Code of Federal Regulations parts 170 and 171, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-17 **DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL**

Section

33.1-10-17-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 70

33.1-10-17-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 70.

10 Code of Federal Regulations 70.1, 70.2, 70.3, 70.4, 70.7, 70.9, 70.10, 70.11, 70.12, 70.17, 70.18, 70.19, 70.20, 70.21, 70.22, 70.23, 70.25, 70.31, 70.32, 70.33, 70.34, 70.35, 70.36, 70.38, 70.39, 70.41, 70.42, 70.50, 70.51, 70.56, and 70.81 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. The following are not adopted by reference: 10 Code of Federal Regulations 70.1(c), (d), and (e); 70.20a; 70.20b; 70.21(a)(1), (c), (f), (g), and (h); 70.22(b), (c), (f), (g), (h), (i), (j), (k), (l), (m), and (n); 70.23(a)(6), (a)(7), (a)(8), (a)(9), (a)(10), (a)(11), (a)(12), and (b); 70.23a; 70.25(a)(1); 70.31(c), (d), and (e); 70.32(a)(1), (a)(4), (a)(5), (a)(6), (a)(7), (b)(1), (b)(3), (b)(4), (c), (d), (e), (f), (g), (h), (i), (j), and (k); 70.42(b)(6); 70.51(c);

paragraph (2) of the definition of "commencement of construction"; and paragraph (9)(ii) of the definition of "construction".

2. Requirements in 10 Code of Federal Regulations part 70 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", "NRC regional administrator", "NRC regional office", "administrator of the appropriate nuclear regulatory commission's regional office", "administrator of the appropriate regional office", or "nuclear regulatory commission's office of nuclear material safety and safeguards, division of industrial and medical nuclear safety" appear in 10 Code of Federal Regulations part 70, substitute the words "department of environmental quality".
4. 10 Code of Federal Regulations 70.7 employee protection also applies to violations of North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
6. North Dakota state form number 8418, "application for radioactive material license", must be used instead of nuclear regulatory commission form 313 as specified in 10 Code of Federal Regulations part 70.
7. North Dakota state form number 8414, "notice to employees", must be posted instead of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations part 70.
8. For references to 10 Code of Federal Regulations part 170, section 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-18 **GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL**

Section

33.1-10-18-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 31

33.1-10-18-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 31.

10 Code of Federal Regulations 31.1, 31.2, 31.3, 31.5, 31.6, 31.7, 31.8, 31.9, 31.10, 31.11, and 31.12 are adopted by reference as they exist on October 1, 2015, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations 31.3(b) and (c) and 31.6(a).

2. Requirements in 10 Code of Federal Regulations 31 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States nuclear regulatory commission", or "director of nuclear material safety and safeguards" appear in 10 Code of Federal Regulations part 31, substitute the words "department of environmental quality" except when used in 10 Code of Federal Regulations 31.8(c)(2) and 31.11(d)(2).
4. Reporting required in 10 Code of Federal Regulations 31.5(c)(5), 31.5(c)(8)(ii), 31.5(c)(9)(i), 31.5 (c)(11), and 31.5(c)(14) shall be submitted to the department of environmental quality as follows:
 - a. By mail addressed to: Radiation Control Program, Department of Environmental Quality, 918 East Divide Avenue, Second Floor, Bismarck, ND 58501-1947.
 - b. By hand delivery to: Radiation Control Program, Department of Environmental Quality, 915 East Divide Avenue, Second Floor, Bismarck, ND.
 - c. By electronic submission to ram@nd.gov. Electronic submissions must be made in a manner that enables the department of environmental quality to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time.
5. North Dakota state form number 8423, "certificate - in vitro testing with radioactive material under general license", must be used instead of nuclear regulatory commission form 483 as specified in 10 Code of Federal Regulations part 31.
6. References in 10 Code of Federal Regulations part 31 to specific licenses issued by an agreement state also include specific licenses issued by the United States nuclear regulatory commission.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-19 **RECIPROCAL RECOGNITION OF LICENSES**

Section

33.1-10-19-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 150

33.1-10-19-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 150.

10 Code of Federal Regulations 150.1, 150.2, 150.3, 150.11, 150.20, 150.31, and 150.32 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 150.3 foreign obligations.

2. Requirements in 10 Code of Federal Regulations part 150 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "regional administrator", "United States nuclear regulatory commission", "region", or "regional administrator of the United States nuclear regulatory commission regional office" appear in 10 Code of Federal Regulations part 150, substitute the words "department of environmental quality" except when used in section 150.5.
4. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
5. North Dakota state form number 58230, "radioactive material reciprocity request", must be used instead of nuclear regulatory commission form 241 as specified in 10 Code of Federal Regulations part 150.
6. Where the words "non-agreement states", "areas of exclusive federal jurisdiction within agreement states", or "offshore waters" are used in 10 Code of Federal Regulations 150.20(a)(1)(i), (ii), (iii), (b), (b)(3), and (b)(4) substitute the words "state of North Dakota".
7. Where the words "agreement states license" are used in 10 Code of Federal Regulations 150.20, also add the words "nuclear regulatory commission license". Where the words "license issued by an agreement state" are used in 10 Code of Federal Regulations 150.20 also add the words "license issued by the nuclear regulatory commission". Where the words "license from an agreement state" are used in 10 Code of Federal Regulations 150.20 also add the words "license from the nuclear regulatory commission".
8. The words "for the first time in a calendar year" are stricken from 10 Code of Federal Regulations 150.20(b)(1).
9. Where the words "in any calendar year, except that the general license in paragraph (a) of this section concerning activities in offshore water authorizes that person to possess or use radioactive materials, or engage in the activities authorized, for an unlimited period of time" are used in 10 Code of Federal Regulations 150.20(b)(4), substitutes the words "in a 365-day period".
10. For references to 10 Code of Federal Regulations part 170, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-20
SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN
ITEMS CONTAINING BYPRODUCT MATERIAL

Section

33.1-10-20-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations
Part 32

33.1-10-20-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 32.

10 Code of Federal Regulations 32.1, 32.2, 32.3, 32.13, 32.17, 32.24, 32.51, 32.51(a), 32.52, 32.53, 32.54, 32.55, 32.56, 32.57, 32.58, 32.59, 32.61, 32.62, 32.71, 32.72, 32.74, 32.101, 32.102, 32.103, 32.110, 32.201, 32.210, and 32.301 are adopted by reference as they exist on October 1, 2015, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 32.1(c)(1).
2. Requirements in 10 Code of Federal Regulations part 32 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "NRC regional office", or "director of nuclear material safety and safeguards" appear in 10 Code of Federal Regulations part 32, substitute the words "department of environmental quality" except when used in 32.51(a)(3)(iii), 32.54(a), 32.58, 32.71(d), 32.72(b)(5), and 32.74(a)(3).
4. Reporting required in 10 Code of Federal Regulations 32.56(a) shall be submitted to the department of environmental quality as follows:
 - a. By mail addressed to: Radiation Control Program, Department of Environmental Quality, 918 East Divide Avenue, Second Floor, Bismarck, ND 58501-1947.
 - b. By hand delivery to: Radiation Control Program, Department of Environmental Quality, 918 East Divide Avenue, Second Floor, Bismarck, ND.
 - c. By electronic submission to ram@nd.gov. Electronic submissions must be made in a manner that enables the department of environmental quality to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time.
5. North Dakota state form number 8418, "application for radioactive material license", must be used instead of nuclear regulatory commission form 313 as specified in 10 Code of Federal Regulations part 32.
6. For references to 10 Code of Federal Regulations part 170, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-21
SPECIFIC DOMESTIC LICENSES OF BROAD SCOPE FOR BYPRODUCT
MATERIAL

Section

33.1-10-21-01 Adoption by Reference of Several Sections in 10 Code Federal Regulations Part 33

33.1-10-21-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 33.

10 CFR 33.1, 33.11, 33.12, 33.13, 33.14, 33.15, 33.16, 33.17, and 33.100 are adopted by reference as they exist on January 1, 2010, with the following exceptions:

1. Requirements in 10 Code of Federal Regulations part 33 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
2. Where the word "commission" appears in 10 Code of Federal Regulations part 33, substitute the words "department of environmental quality".
3. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.
4. North Dakota state form number 8418, "application for radioactive material license", must be used instead of nuclear regulatory commission form 313 as specified in 10 Code of Federal Regulations part 33.
5. For references to 10 Code of Federal Regulations part 170, see chapter 33.1-10-11 for applicable fee schedules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-22
PHYSICAL PROTECTION OF CATEGORY 1 AND CATEGORY 2 QUANTITIES OF
RADIOACTIVE MATERIAL

Section

33.1-10-22-01 Adoption by Reference of Several Sections in 10 Code of Federal Regulations Part 37

33.1-10-22-01. Adoption by reference of several sections in 10 Code of Federal Regulations part 37.

10 Code of Federal Regulations 37.1, 37.3, 37.5, 37.11, 37.21, 37.23, 37.25, 37.27, 37.29, 37.31, 37.33, 37.41, 37.43, 37.45, 37.47, 37.49, 37.51, 37.53, 37.55, 37.57, 37.71, 37.73, 37.75, 37.77, 37.79, 37.81, 37.101, 37.103, 37.105, and appendix A to part 37 are adopted by reference as they exist on December 1, 2015, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations (CFR) 37.11(b) and 37.43(d)(9).
2. All of the requirements in chapter 33.1-10-22 apply to both licensees and registrants. A reference in 10 CFR part 37 to "license" includes "registration", a reference to "licensee"

includes "registrant", a reference to "licensed" includes "registered", a reference to "licensed material(s)" includes "registered source of radiation" and a reference to "licensed radioactive material" includes "registered source of radiation". "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to article 33.1-10 and North Dakota Century Code chapter 23.1-03. "Registration" means the notification of the department of environmental quality of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with North Dakota Century Code chapter 23.1-02.

3. Where the word "NRC" appears in 10 CFR 37.31(d), 37.43(c)(3)(iii), 37.57(a), 37.57(c), 37.77 [with the exception of "the NRC's Web site" in 37.77(a)(1)], and 37.81(g), substitute the words "department of environmental quality".
4. Where the word "Commission" appears in 10 CFR 37.5 (definitions of "byproduct material" and "person"), 37.11(a), 37.43(a)(3), 37.43(c)(1)(ii), 37.101, 37.103, and 37.105, substitute the words "department of environmental quality".
5. Where the words "NRC regional office" appear in 10 CFR 37.41(a)(3) and 37.81, substitute the words "department of environmental quality".
6. Where the words "appropriate NRC regional office listed in § 30.6(a)(2) of this chapter" appear in 10 CFR 37.45(b), substitute the words "department of environmental quality".
7. Where the words "NRC's Operational Center (301-816-5100)" appear in 10 CFR 37.57(a), 37.57(b), and 37.81, substitute the words "department of environmental quality".
8. Where the words "NRC's Operational Center" appear in 10 CFR 37.81, substitute the words "department of environmental quality".
9. Where the words "NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001. The notification to the NRC may be made by email to RAMQC SHIPMENTS@nrc.gov or by fax to 301-816-5151" appear in 10 CFR 37.77(a)(1), substitute the words "department of environmental quality".
10. Where the words "NRC's Director of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" appear in 10 CFR 37.77(c)(1), substitute the words "department of environmental quality".
11. Where the words "NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" appear in 10 CFR 37.77(c)(2) and 37.77(d), substitute the words "department of environmental quality".
12. Where the words "Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-

0001" appear in 10 CFR 37.81(g), substitute the words "department of environmental quality".

13. Requirements in 10 CFR part 37 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.

14. "Act" includes North Dakota Century Code chapters 23.1-02 and 23.1-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

CHAPTER 33.1-10-23

REGULATION AND LICENSING OF TECHNOLOGICALLY ENHANCED NATURALLY OCCURRING RADIOACTIVE MATERIAL

Section

<u>33.1-10-23-01</u>	<u>Purpose</u>
<u>33.1-10-23-02</u>	<u>Scope</u>
<u>33.1-10-23-03</u>	<u>Definitions</u>
<u>33.1-10-23-04</u>	<u>Exemptions</u>
<u>33.1-10-23-05</u>	<u>Standards for Radiation Protection for Members of the Public</u>
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<u>33.1-10-23-08</u>	<u>Disposal and Transfer of Waste for Disposal</u>
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<u>33.1-10-23-24</u>	<u>Reciprocal Recognition of Specific Licenses</u>
<u>33.1-10-23-25</u>	<u>Financial Assurance Arrangements</u>
<u>33.1-10-23-26</u>	<u>Acceptable Surface Contamination Levels for TENORM</u>
<u>33.1-10-23-27</u>	<u>Specific Licenses - Radiation Protection Program Required</u>
<u>33.1-10-23-28</u>	<u>Radiation Safety Officer - Qualifications</u>

33.1-10-23-01. Purpose.

This chapter establishes radiation protection standards for technologically enhanced naturally occurring radioactive material (TENORM). These standards include the possession, use, processing, manufacture, distribution, transfer, and disposal of TENORM and of products containing TENORM. This chapter also provides for the licensing of TENORM, including license termination. The provisions of this chapter are in addition to the definitions and applicable requirements of chapters 33.1-10-01, 33.1-10-03.1, 33.1-10-04.2, 33.1-10-10.1, and 33.1-10-13.1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-02. Scope.

1. Except as otherwise provided, this chapter applies to any person who receives, possesses, uses, processes, transfers, distributes, or disposes of TENORM.
2. The manufacture and distribution of products containing TENORM, in which the TENORM's emitted radiation is considered beneficial to the products, are licensed pursuant to the provisions of chapter 33.1-10-03.1.
3. This chapter addresses the introduction of TENORM into products in which the radiation emitted from the TENORM is not considered to be beneficial to the products.
4. This chapter does not apply to source material and byproduct material as both are defined in the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.] and relevant regulations implemented by the United States nuclear regulatory commission.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-03. Definitions.

The terms used throughout this chapter have the same meaning as in North Dakota Century Code chapter 23.1-03, except:

1. "Applicant" means a person applying for a license under this chapter and includes any individual or entity that owns or controls the applicant.
2. "Beneficial to the product" means that the radioactivity of the TENORM is necessary to the use of the product.
3. "Conditional release" means release by a licensee for a specified use other than release for unrestricted use.
4. "Consumer" means a member of the public exposed to TENORM from final end-use products available on a retail basis.

5. "Consumer or retail product" means any product, article, or component part thereof, produced, distributed, or sold for use by a consumer in or around a permanent or temporary household or residence, or for the personal use, consumption, or enjoyment of a consumer, or for use in or around a school or playground.
6. "Critical group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.
7. "Generator" means any person whose act or process produces TENORM or whose act first causes the TENORM to become subject to regulation.
8. "Purposeful dilution" means a deliberate act of the mixing of clean or unlike materials with contaminated materials for the purpose of changing waste classification or concentration of waste.
9. "Product" means something produced, made, manufactured, refined, or beneficiated.
10. "Radiation safety officer" means an individual with the responsibility for the overall radiation safety program on behalf of the licensee and who meets the requirements of section 33.1-10-23-28.
11. "Reasonably maximally exposed individual" means a representative of a population who is exposed to TENORM at the maximum TENORM concentration measured in environmental media found at a site along with reasonable maximum case exposure assumptions. The exposure is determined by using maximum values for one or more of the most sensitive parameters affecting exposure, based on cautious but reasonable assumptions, while leaving the others at their mean value.
12. "Reclaiming" means returning property to a condition or state such that the property no longer presents a health or safety hazard or threat to the environment; the term "reclaiming" includes those activities necessary to decommission the licensed facility (i.e., to remove, as a facility, safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license).
13. "Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of chapter 33.1-10-04.2.
14. "Tank" means a stationary device, other than a container as described in subsection 2 of section 33.1-10-23-08, designed to contain an accumulation of TENORM waste, which is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, or plastic), which provide structural support.
15. "Technologically enhanced naturally occurring radioactive material (TENORM)" means naturally occurring radioactive material whose radionuclide concentrations are

increased by or as a result of past or present human practices. TENORM does not include background radiation or the natural radioactivity of rocks or soils. TENORM does not include "source material" and "byproduct material" as both are defined in the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.] and relevant regulations implemented by the United States nuclear regulatory commission.

16. "Transfer" means the physical relocation of TENORM within a business' operation or between general or specific licensees. This term does not include commercial distribution or a change in legal title to TENORM that does not involve physical movement of those materials.
17. "Total effective dose equivalent" or "TEDE" means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-04. Exemptions.

1. Persons who receive, possess, use, process, transfer, distribute, or dispose of TENORM are exempt from the requirements of this chapter with respect to any combination of radium-226 and radium-228 if the materials contain, or are contaminated at, concentrations less than one hundred eighty five becquerel per kilogram [five picocuries per gram (5.0 pCi/g)] excluding natural background radiation. The progeny of the exempt TENORM radium-226 and radium-228 are also exempt.
2. Persons who receive products or materials containing TENORM distributed in accordance with a specific license issued by the department pursuant to subsection 1 of section 33.1-10-23-11, or to an equivalent license issued by another licensing state, are exempt from this chapter with regard to those products or materials.
3. Persons who receive, possess, use, process, transfer, and distribute, including preparation of custom blends for distribution, phosphate or potash ore-based fertilizers containing TENORM are exempt from this chapter.
4. Persons who receive, possess, use, process, transfer, dispose into a permitted landfill, and distribute, including preparation of custom blends for distribution, zirconia, zircon, and products of zirconia and zircon containing TENORM are exempt from this chapter. A facility that manufactures zirconia or zircon from ore is not exempt from this chapter. A facility that chemically processes zirconia or zircon resulting in increased environmental mobility of TENORM is not exempt from this chapter.
5. Persons who possess TENORM waste regulated by the Comprehensive Environmental Response, Compensation and Liability Act, as amended [42 U.S.C. 9601 et seq.] or by the Resource Conservation and Recovery Act, as amended [42 U.S.C. 6901 et seq.] or equivalent state authority are exempt from this chapter for the TENORM waste regulated by either of these federal acts.

6. Other persons who possess or use TENORM shall be exempt when the department makes a determination, upon its own initiative or upon request for such determination, that the reasonably maximally exposed individual will not receive a public dose with a TEDE of more than one millisievert [one hundred millirem] in one year from all licensed or registered sources of radiation including TENORM.
7. Persons who possess TENORM in the form of coal combustion residuals (i.e., fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste) from energy conversion facilities are exempt from this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-05. Standards for radiation protection for members of the public.

1. All licensees shall conduct operations with TENORM so that individual members of the public will not exceed one millisievert [one hundred millirem] TEDE in a year, exclusive of the dose contributions from background radiation, from all licensed or registered sources of radiation, including TENORM. Doses from inhalation of indoor radon and its short half-life (less than one hour) progeny shall not be included in calculations of the TEDE, except when the dose is due to releases from licensed operations involving the handling or processing of TENORM.
2. Persons subject to a specific or general license under this chapter shall comply with the radiation protection standards in chapter 33.1-10-04.2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-06. Protection of workers during operations.

Each person subject to a specific or general license under this chapter shall conduct operations so that protection of workers complies with the radiation protection standards in chapters 33.1-10-04.2 and 33.1-10-10.1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-07. Unrestricted use and conditional release.

Each general or specific licensee shall, no less than thirty days before vacating or relinquishing possession or control of premises which may have been contaminated with TENORM as a result of the licensee's activities, notify the department in writing of intent to vacate. When deemed necessary by the department, the licensee shall decontaminate the premises in accordance with the following or in such other manner as the department may specify.

1. Each licensee before vacating or transferring any premises shall permanently decontaminate the premises to meet the criteria for decommissioning in 10 CFR part 20, subpart E. The licensee shall make a survey after the decontamination and provide a copy to the department and any landlord, subsequent tenant, or transferee. The premises may not be vacated, sold, or transferred until the department verifies and accepts the decontamination survey.
2. No machinery, instruments, laboratory equipment, or any other property used in contact with, or close proximity to TENORM at a licensed premises may be assigned, sold, leased, or transferred to an unlicensed person unless such property has been permanently decontaminated below or equal to the standards specified in table 4.2-07.1 of chapter 33.1-10-04.2. The licensee shall make a survey after the decontamination and provide a copy to the department and subsequent transferee or owner. The equipment may not be assigned, sold, leased, or transferred until the department verifies and accepts the decontamination survey.
3. Persons with a specific license must also comply with the requirements of subdivisions f and g of subsection 1 of section 33.1-10-23-17 and section 33.1-10-23-18 that are applicable to remediation and license termination.
4. Persons with a general license must notify the department in writing before beginning activities to reclaim the site. Decontamination activities require a specific license under section 33.1-10-23-11.
5. Notification of site or area closure. When the general licensee has permanently ceased use of radioactive materials at a site or portion of a site or facility or when an area has not been used for a period of two years, the licensee shall, within sixty days, provide the following information in writing to the department:
 - a. The location of the site or area; and
 - b. The plan for reclaiming or decontaminating the site or area.
6. Actions taken to confine TENORM on site or to remediate sites shall be based on expected longevity-related controls for one thousand years or longer.
7. Conditional release of metal for recycle. Conditionally released metal for recycle shall be done only under the condition that metal contaminated with TENORM does not exceed a maximum exposure level of fifty microrentgens per hour, including background radiation, at any accessible location of the metal surface prior to release from the site.
8. Equipment not released for unrestricted use. Equipment contaminated with TENORM in excess of levels specified in section 33.1-10-23-26 may be transferred pursuant to subsection 4 of section 33.1-10-23-10.
9. Other transfers of TENORM. Other transfers of TENORM shall be in accordance with sections 33.1-10-23-08, 33.1-10-23-10, or 33.1-10-23-11.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-08. Disposal and transfer of waste for disposal.

1. Each person subject to this chapter's general and specific licensing requirements shall manage and dispose of wastes containing TENORM:

a. By transfer of the wastes for storage, treatment, or disposal at a facility authorized to accept wastes containing TENORM by the department or other applicable state or federal agency;

b. By transfer for disposal in another state as otherwise approved by the applicable governmental authority; or

c. In accordance with alternate methods authorized by the department or other applicable state or federal agency.

2. Containers:

a. TENORM waste shall be kept in a leak-proof container.

b. The licensee shall use a container made of, or lined with, materials that will not react with, or be incompatible with the TENORM waste to be stored so that the ability of the container to contain the waste is not impaired or compromised.

c. A container containing TENORM waste shall always be closed or covered to prevent loss of material and entrance of outside elements during storage or while in transport, except when it is necessary to add or remove waste.

d. A container containing TENORM waste shall not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

e. At least quarterly, the licensee shall inspect areas where containers of TENORM waste are stored, looking for leaking or deteriorating containers or containment systems.

f. All containers of TENORM waste shall be stacked in such a manner that each container identification label can be read from the access aisle or area.

g. Each container of TENORM waste shall be labeled with the following information prior to storage:

(1) Name and address of generator.

(2) Type of material (e.g., sludge, scale, dirt, scrap metal, etc.).

(3) Date stored.

(4) Labeled as radioactive material.

h. Records of inspections shall be maintained by the licensee for inspection by the department for five years.

3. Tanks containing TENORM.

The licensee shall develop a schedule and procedure for assessing the condition of each tank containing TENORM waste. The schedule and procedure must be adequate to detect cracks, leaks, corrosion, and erosion that may lead to cracks, leaks, or wall thinning to less than the required thickness to maintain vessel integrity. Procedures for emptying a tank to allow entry, procedures for personnel protection, and inspection of the interior must be established when necessary to detect corrosion of the tank sides and bottom. The frequency of these inspections shall be performed at intervals not to exceed twelve months. Records shall be maintained for a period of five years.

4. Each shipment of TENORM shall be accompanied by a manifest containing all of the following information prior to leaving the licensee's site:

- a. The licensee's (generator's) name, physical site address, and telephone number;
- b. The name, address, telephone number, and radioactive material license number of each transporter;
- c. The name, address, and telephone number of the designated disposal facility;
- d. The description of the waste material; and
- e. The total quantity of all TENORM waste by units of weight in tons or cubic yards and the number and type of containers.

5. The following certification must appear on the manifest and be signed and dated by the licensee as follows:

"I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport according to applicable international and national government regulations."

6. The licensee shall:

- a. Sign and date the manifest upon initial transporter acceptance of the waste material;
- b. Obtain the signature of the initial transporter and date of the acceptance of the manifest;
- c. Retain one copy for a period of not less than three years;
- d. Provide the initial transporter the remaining copies of the manifest; and

e. Receive the fully signed copy of the manifest from the designated disposal facility within forty-five days from the delivery to the initial transporter. In the event the licensee does not receive the signed manifest within this period, the licensee shall:

(1) Notify the department within seven days;

(2) Conduct an investigation into the reason the manifest was not received; and

(3) Report the results of the investigation to the department within thirty days.

7. The licensee shall file with the department a quarterly summary report stating the date, type, and total quantity by weight in tons or cubic yards, generator and final disposal facility of each TENORM transferred. Each report shall be filed within thirty days of the end of each quarter. If no transfers of TENORM have been made during the reporting period, the report must so indicate. Quarterly summary reports shall be maintained for a period of three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-09. Prohibition - Purposeful dilution.

Purposeful dilution to render TENORM exempt shall not be performed without prior department approval.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-10. General licenses.

1. A general license is hereby issued to possess, use, transfer, distribute, or dispose of TENORM without regard to quantity, except for those activities requiring a specific license.

2. Employees or contractors under control and supervision of a general licensee may perform routine maintenance on equipment, facilities, and land owned or controlled by the general licensee. Maintenance that provides a pathway for exposure different from that found in periodic maintenance operations and that increases the potential for additional exposure is not considered routine maintenance. The decontamination of equipment, facilities, and land shall be performed only by persons specifically licensed by the department, an agreement state, or another licensing agency to conduct such work.

3. Any person subject to the general license issued under this section shall notify the department within sixty days of the effective date of this chapter or of becoming subject to the general license. The notification shall include the following:

a. Name and address of the licensee;

- b. Location and description of the facility, facilities, or portion of a facility where the TENORM is situated; and
- c. Description of the TENORM, including estimates of the amount and extent of TENORM.
- 4. Transfer of material, equipment, or real property.
 - a. The transfer of TENORM, not exempt from article 33.1-10, from one general licensee to another general licensee is authorized if:
 - (1) The equipment and facilities contaminated with TENORM are to be used by the recipient for a similar purpose, provided that no member of the public shall receive a dose in excess of that allowed under subsection 1 of section 33.1-10-23-05; or
 - (2) The transfer of control or ownership of land contaminated with TENORM includes an annotation of the deed records to indicate the presence of TENORM.
 - b. For transfers not made in accordance with subdivision a, the transferor shall obtain the department's prior written approval for the transfer.
 - c. For transfers made under subdivision a, the transferor shall assess the amount and extent of TENORM contamination or material present, inform the general licensee receiving the TENORM of these assessments prior to such transfer, and maintain records that include:
 - (1) The date, recipient name, and location;
 - (2) A description and quantity of the material; and
 - (3) A description of the procedures and mechanisms used to ensure that material will not be released in another manner, such as an unrestricted release.
 - d. A general licensee intending to transfer material or real property for unrestricted use shall document compliance with the requirements of section 33.1-10-23-07. Records of such compliance shall be maintained for ten years.
- 5. Distribution of TENORM products between general licensees. The distribution of TENORM products from one general licensee to another general licensee is authorized provided the product is accompanied by labels or manifests which identify the type and amount of TENORM.
- 6. The department may, by written notice, require any person authorized by a general license to apply for and obtain a specific license if the department determines that specific licensure is necessary to ensure that exposures do not exceed the criteria of sections 33.1-10-23-05 and 33.1-10-23-06. The notice shall state the reason or reasons for requiring a specific license.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-11. Specific licenses.

1. A specific license is required to manufacture and distribute any consumer or retail product containing TENORM unless the manufacture and distribution are:
 - a. Authorized as specified by section 33.1-10-23-10;
 - b. Licensed under the provisions of chapter 33.1-10-03.1; or
 - c. Otherwise exempt in accordance with another chapter of article 33.1-10.
2. A specific license is required to decontaminate equipment or land not exempted under the provisions of section 33.1-10-23-04 or to decontaminate facilities contaminated with TENORM in excess of the levels in section 33.1-10-23-07. For purposes of this subsection, the term "decontaminate" shall not include routine maintenance which results in the incidental removal of contamination.
3. A specific license is required to receive TENORM from other persons for storage.
4. A specific license is required to possess or use TENORM for the purposes of processing, treatment, or disposal.
5. A specific license is required to transport TENORM upon public roadways.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-12. Application and background review for specific licenses.

1. Applications for specific licenses shall be in English and filed in a manner and on a form prescribed by the department.
2. The department may at any time after the filing of the original application, and before the termination of the license, require further statements in order to enable the department to determine whether the application shall be granted or denied or whether a license shall be modified or revoked.
3. An applicant must provide information required by the department to complete an environmental compliance background review, including:
 - a. Consent to a criminal history check under North Dakota Century Code section 12-60-24.
 - b. Disclosure of personal and business information on a form provided by the department, executed under oath or affirmation, which includes:
 - (1) The person's name and address;

- (2) A description of the person's experience in managing the type of TENORM that will be managed under the license;
- (3) A description of every civil and administrative complaint against the person for the violation of any state or federal environmental protection law which has resulted in a fine or penalty of more than ten thousand dollars within five years before the date of the submission of the application;
- (4) A description of every settlement agreement entered into by the person with a federal or state agency to resolve any alleged violation of any state or federal environmental protection law which has resulted in a payment of more than ten thousand dollars within five years before the date of the submission of the application;
- (5) A description of every pending notice of violation, civil complaint, administrative complaint, or criminal complaint alleging the violation of any state or federal environmental protection law;
- (6) A description of every judgment of criminal conviction entered against the applicant within five years before the date of submission of the application for the violation of any state or federal environmental protection law;
- (7) A description of every judgment of criminal conviction of a felony constituting a crime involving fraud or misrepresentation under the laws of any state or of the United States which has been entered against the applicant within five years before the date of submission of the application; and
- (8) Any other information the department deems relevant.
- c. In addition to the applicant, the following related individuals and entities may be required to submit personal and business disclosure information:
 - (1) Each entity that is, or is proposed to be:
 - (a) A partner;
 - (b) An entity contracted with the applicant to operate, manage, or supervise the facility or activities for which approval is being sought;
 - (c) An entity holding of ten percent or more of the applicant's debt;
 - (d) An entity holding ten percent or more of the applicant's equity;
 - (e) The parent corporation, holding corporation, and any other entity that exercises control over the facility or activities for which approval is being sought.
 - (2) Each individual which has, or is proposed to have, any of the following relationships with the applicant:
 - (a) Director;

33.1-10-23-13. Requirements for the issuance of specific licenses.

1. A license application will be approved if the department determines that:

a. The applicant is qualified by reason of training and experience to use the TENORM in question for the purpose requested in accordance with article 33.1-10 in such a manner as to protect the public health and safety or property;

b. The applicant's proposed equipment, facilities, and procedures are adequate to protect the public health and safety or property;

c. The issuance of the license will not constitute a significant risk to the health and safety of the public;

d. The applicant satisfied all applicable special requirements in this chapter;

e. The applicant has met the financial assurance requirements of section 33.1-10-23-25;

f. The applicant has adequately addressed the following items in the application:

(1) Procedures and equipment for monitoring and protecting workers;

(2) An evaluation of the radiation levels and concentrations of contamination expected during normal operations;

(3) Operating and emergency procedures, including procedures for waste reduction and quality assurance of items released for unrestricted use; and

(4) A method for managing the radioactive material removed from contaminated equipment, facilities, and land.

g. For each location to be listed on the license as an authorized use location, the applicant shall submit either:

(1) A statement that the applicant owns the facility where radioactive material is to be used or stored; or

(2) A statement verifying that the facility owner has been informed, in writing, of the use or storage of radioactive material at the facility, and that the use of such material is subject to the rules of the department.

2. An application for a specific license to transfer or manufacture or distribute consumer or retail products containing TENORM to persons exempted from this chapter under subsection 2 of section 33.1-10-23-04 will be approved if:

a. The applicant satisfies the general requirements specified in subsection 1;

b. The TENORM is not contained in any food, beverage, cosmetic, drug, or other commodity designed for ingestion or inhalation by, or application to, a human being; and

c. The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, and conditions of handling, storage, use, and disposal of the TENORM product to demonstrate that the product will meet the safety criteria set forth in section 33.1-10-23-14. The information shall include:

- (1) A description of the product and its intended use or uses;
- (2) The type, quantity, and concentration of TENORM in each product;
- (3) The chemical and physical form of the TENORM in the product, and changes in chemical and physical form that may occur during the useful life of the product;
- (4) An analysis of the solubility in water and body fluids of the radionuclides in the product;
- (5) The details of manufacture and design of the product relating to containment and shielding of the TENORM and other safety features under normal and severe conditions of handling, storage, use, reuse, and disposal of the product;
- (6) The degree of access of human beings to the TENORM product during normal handling, use, and disposal;
- (7) The total quantity of TENORM expected to be distributed annually in the product;
- (8) The expected useful life of the product;
- (9) The proposed method of labeling or marking each unit of the product with identification of the manufacturer or initial transferor of the product and the radionuclides and quantity of TENORM in the product;
- (10) The procedures for prototype testing of the product to demonstrate the effectiveness of the containment, shielding, and other safety features under both normal and severe conditions of handling, storage, use, reuse, and disposal;
- (11) The results of the prototype testing of the product, including any change in the form of the TENORM contained in it, the extent to which the TENORM may be released to the environment, any change in radiation levels, and any other changes in safety features;
- (12) The estimated external radiation doses and committed dose equivalent relevant to the safety criteria in section 33.1-10-23-14 and the basis for such estimates;
- (13) A determination that the probabilities with respect to doses referred to in section 33.1-10-23-14 meet the safety criteria;

(14) The quality control procedures to be followed in the processing of production lots of the product, and the quality control standards the product will be required to meet; and

(15) Any additional information, including experimental studies and tests, required by the department to facilitate a determination of the radiation safety of the product.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-14. Safety criteria for consumer and retail products.

An applicant for a license under subsection 2 of section 33.1-10-23-13 shall demonstrate that the product is designed and will be manufactured so that:

1. In normal use and disposal of a single exempt item, and in normal handling and storage of the quantities of exempt items likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, it is unlikely that the dose in any one year, to a suitable sample of the group of individuals expected to be most highly exposed to radiation or radioactive material from the product will exceed the doses in column I of section 33.1-10-23-15.

2. In use and disposal of a single exempt item and in handling and storage of the quantities of exempt items likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, the probability is low that the containment, shielding, or other safety features of the product would fail under such circumstances that a person would receive an external radiation dose or committed dose equivalent in excess of the dose to the appropriate part of the body as specified in column II of section 33.1-10-23-15 and the probability is negligible that a person would receive an external radiation dose or committed dose equivalent in excess of the dose to the appropriate part of the body as specified in column III of section 33.1-10-23-15.

3. It is unlikely that there will be a significant reduction in the effectiveness of the containment, shielding, or other safety features of the product from wear and abuse likely to occur in normal handling and use of the product during its useful life.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-15. Table of doses.

The dose limits in this section are the doses above background from the product.

1. Column I doses are:

a. For the whole body; head and trunk; active blood-forming organs; gonads; or lens of eye - fifty microsieverts [five millirem].

b. For the hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter - seven hundred fifty microsieverts [seventy-five millirem].

c. For other organs - one hundred fifty microsieverts [fifteen millirem].

2. Column II doses are:

a. For the whole body; head and trunk; active blood-forming organs; gonads; or lens of eye - five millisieverts [five hundred millirem].

b. For the hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter - seventy-five millisieverts [seven thousand five hundred millirem].

c. For other organs - fifteen millisieverts [one thousand five hundred millirem].

3. Column III doses are:

a. For the whole body; head and trunk; active blood-forming organs; gonads; or lens of eye - one hundred fifty millisieverts [fifteen rem].

b. For ankles and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter - two thousand millisieverts [two hundred rem].

c. For other organs - five hundred millisieverts [fifty rem].

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-16. Issuance of specific licenses.

1. Upon a determination that an application meets the requirements of article 33.1-10, the department will issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary.

2. The department may incorporate in any license at the time of issuance, or thereafter by amendment, such additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of TENORM subject to this chapter as it deems appropriate or necessary in order to:

a. Protect public health and safety or property;

b. Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be appropriate or necessary; and

c. Prevent loss, theft, or loss of control of TENORM subject to this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-17. Conditions of specific licenses.

1. General terms and conditions.

a. Each specific license issued under this chapter shall be subject to all the provisions of North Dakota Century Code chapters 23.1-02, 23.1-03, and 23.1-05, now or hereafter in effect, and to all rules and orders of the department.

b. No specific license issued or granted under this chapter and no right to possess or utilize TENORM granted by any license issued under this chapter shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the department shall, after securing full information, find that the transfer is in accordance with the provisions of North Dakota Century Code chapters 23.1-02, 23.1-03, and 23.1-05, and shall give its consent in writing.

c. Each person specifically licensed under this chapter shall confine use and possession of the TENORM licensed to the locations and purposes authorized in the specific license.

d. Transfer of control.

Within thirty days of the existence of any new controlling individual or entity, the licensee shall submit to the department the name of the controlling individual or entity and a statement signed by the controlling individual or entity in which the controlling individual or entity agrees to accept responsibility for the license. The controlling individual or entity must undergo an environmental compliance background review under section 33.1-10-23-12.

e. Notification of bankruptcy.

(1) Each licensee shall notify the department, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapters of Title 11 (bankruptcy) of the United States Code by or against:

(a) The licensee;

(b) An entity [as that term is defined in 11 U.S.C. 101(15)] controlling a licensee or listing the license or licensee as property of the estate; or

(c) An affiliate [as that term is defined in 11 U.S.C. 101(2)] of the licensee.

(2) This notification shall indicate:

(a) The bankruptcy court in which the petition for bankruptcy was filed; and

(b) The date of the filing of the petition.

- f. Each licensee shall notify the department in writing prior to commencing activities to reclaim the licensed facility and site.
 - g. Notification of site or area closure. When a licensee has permanently ceased use of radioactive materials at a site or portion of a facility and the licensee has not decontaminated the area, or when an area has not been used for a period of two years, the licensee shall, within sixty days, provide the following information in writing to the department:
 - (1) The location of the facility, site, or area;
 - (2) The plan for reclaiming or decontaminating the facility, site, or area; and
 - (3) An evaluation of any changes to the financial assurance submitted in accordance with section 33.1-10-23-25.
 - h. Temporary jobsites.
 - (1) When temporary jobsites are authorized on a specific license, TENORM may be used at temporary jobsites throughout North Dakota in accordance with the reciprocal recognition provisions of section 33.1-10-23-24 or chapter 33.1-10-19, in areas not under exclusive federal jurisdiction.
 - (2) Before TENORM can be used at a temporary jobsite at any federal facility within North Dakota, the jurisdictional status of the jobsite shall be determined as it pertains to the TENORM. Authorization for use of TENORM at jobsites under exclusive federal jurisdiction shall be obtained from the applicable federal agency.
2. Quality control, labeling, and reports of transfer. Each person licensed under subsection 2 of section 33.1-10-23-13 shall:
- a. Carry out adequate control procedures in the manufacture of the product to assure that each production lot meets the quality control standards approved by the department;
 - b. Label or mark each unit so that the manufacturer, processor, producer, or initial transferor of the product and the TENORM in the product can be identified; and
 - c. Maintain records identifying, by name and address, each person to whom TENORM is transferred for use under subsection 2 of section 33.1-10-23-04 or the equivalent rules of another licensing state, and stating the kinds, quantities, and uses of TENORM transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license shall be filed with the department. Each report shall cover the year ending December 31, and shall be filed within ninety days thereafter. If no transfers of TENORM have been made pursuant to subsection 2 of section 33.1-10-23-13 during the reporting period, the report shall so indicate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-18. Expiration and termination of specific licenses.

1. Except as provided in subsection 2 of section 33.1-10-23-19, the authority to engage in licensed activities as specified in the specific license shall expire at the end of the specified day in the month and year stated therein. Any expiration date on a specific license applies only to the authority to engage in licensed activities. Expiration of a specific license shall not relieve the licensee of responsibility for decommissioning its facility and terminating the specific license.
2. Each licensee shall notify the department immediately, in writing, and request termination of the license when the licensee decides to terminate all activities involving radioactive materials authorized under the license. This notification and request for termination shall include the documents required by subsection 4 and shall otherwise substantiate that the licensee has met all of the requirements in subsection 4.
3. No less than thirty days before the expiration date specified in a specific license, the licensee shall either:
 - a. Submit an application for license renewal pursuant to section 33.1-10-23-19; or
 - b. Notify the department, in writing, if the licensee decides not to renew the license. The licensee requesting termination of a license shall comply with the requirements of subsection 4;
4. Termination of licenses.
 - a. If a licensee does not submit a complete application for license renewal pursuant to section 33.1-10-23-19, the licensee shall, on or before the expiration date specified in the license:
 - (1) Terminate use of the TENORM specified in the license;
 - (2) Remove radioactive contamination to the level outlined in section 33.1-10-23-07, to the extent practicable;
 - (3) Properly dispose of the TENORM specified in the license;
 - (4) Submit a completed department form "Certificate: Disposition of Radioactive Material" (SFN 18941); and
 - (5) Submit a radiation monitoring report to confirm the absence of TENORM specified in the license or to establish the levels of residual radioactive contamination, unless the licensee demonstrates the absence of residual radioactive contamination in some other manner acceptable to the department. The radiation monitoring report shall specify the instrumentation used and certify that each instrument was properly calibrated and tested. The licensee shall, as applicable, report levels or quantities of:

- (a) Beta and gamma radiation at one centimeter from surfaces in units, multiples, or subunits of sieverts or rem per hour or microroentgens per hour;
 - (b) Gamma radiation at one meter from surfaces in units, multiples, or subunits of sieverts or rem per hour or microroentgens per hour;
 - (c) Removable radioactivity on surfaces in units, multiples, or subunits of becquerels or curies per one hundred square centimeters of surface area or in disintegrations (transformations) per minute per one hundred square centimeters of surface area;
 - (d) Fixed radioactivity on surfaces in units, multiples, or subunits of becquerels or curies per one hundred square centimeters of surface area or in disintegrations (transformations) per minute per one hundred square centimeters of surface area;
 - (e) Radioactivity in contaminated liquids such as water, oils, or solvents in units, multiples, or subunits of becquerels or curies per milliliter of volume or per gram of liquid; and
 - (f) Radioactivity in contaminated solids such as soils or concrete in units, multiples, or subunits of becquerels or curies per gram of solid.
- b. If levels of residual radioactive contamination attributable to activities conducted under the license are less than those established in section 33.1-10-23-07, the licensee shall so certify. If the department determines that this certification and the information submitted under subdivision a is adequate and monitoring confirms the findings, then the department will notify the licensee, in writing, of the termination of the license.
- c. If residual radioactive contamination attributable to activities conducted under the license are not in conformance with criteria established in section 33.1-10-23-07:
- (1) The license continues in effect beyond the expiration date, if necessary, with respect to possession of residual TENORM present as contamination until the department notifies the licensee in writing that the license is terminated. During this time the licensee is subject to the provisions of subsection 5.
 - (2) In addition to the information submitted under subdivision a of subsection 4, the licensee shall submit a plan for decontamination and disposal, if required, as regards residual TENORM contamination remaining at the time the license expires.
5. Each licensee who possesses TENORM under subdivision c of subsection 4, following the expiration date specified in the license, shall:
- a. Limit actions involving TENORM as specified in the license to those related to decontamination and other activities related to preparation for release for unrestricted use; and

- b. Continue to control entry to restricted areas until they are suitable for release for unrestricted use and the department notifies the licensee in writing that the license is terminated.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-19. Renewal of specific licenses.

1. Applications for renewal of specific licenses shall be filed in accordance with section 33.1-10-23-12.
2. In any case in which a licensee, not less than thirty days prior to expiration of an existing license, has filed an application in proper form for renewal or for a new license authorizing the same activities, the existing license shall not expire until final action by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-20. Amendment of specific licenses at request of licensee.

Applications for amendment of a license shall be filed in accordance with section 33.1-10-23-12 and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-21. Department action on applications to renew and amend specific licenses.

In considering an application by a licensee to renew or amend the license, the department will apply the criteria set forth in section 33.1-10-23-13.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-22. Modification and revocation of specific licenses.

1. The terms and conditions of all licenses shall be subject to amendment, revision, or modification or the license may be suspended or revoked by reason of amendments to North Dakota Century Code chapters 23.1-02, 23.1-03, 23-20.2, or 23.1-05, or by reason of rules and orders issued by the department.
2. Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or because of conditions revealed by such application

or any report, record, or inspection or other means which would warrant the department to refuse to grant a license on an original application, or for violation of, or failure to observe any of the terms and conditions of North Dakota Century Code chapters 23.1-02, 23.1-03, or 23.1-05, or of the license, or of any rule or order of the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-23. Recordkeeping requirements for site reclamation.

Each licensee shall keep records of information important to the safe and effective reclamation of a facility in an identified location until the license is terminated by the department. If records of relevant information are maintained for other purposes, reference to these records and their locations may be used. The records must include the following information:

1. Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records shall include any known information on identification of involved radionuclides, quantities, forms, and concentrations.
2. As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used or stored, and of locations of possible inaccessible contamination, such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.
3. If required by section 33.1-10-23-25, records of this reclaiming cost estimate prepared for the amount approved by the department for reclaiming.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-24. Reciprocal recognition of specific licenses.

1. Any person who holds a specific license from another agreement state or licensing state, issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the activities authorized in such licensing document within North Dakota for a period not in excess of one hundred eighty days in any twelve-month period, provided that:
 - a. A current copy of the licensing document or equivalent authorization is on file with the department and the authorized activities are not limited to specified installations or locations;

- b. The out-of-state licensee notifies the department at least three days before engaging in such activity. Such notification shall indicate the location, period, and type of proposed possession and use within North Dakota. Upon receipt from the out-of-state licensee of a written request containing a schedule of activities to be conducted within North Dakota, the department may waive the requirement for additional notifications during the twelve-month period following the receipt of the initial notification;
- c. The out-of-state licensee complies with all applicable rules of the department including sections 33.1-10-23-11 and 33.1-10-23-12 and with all the terms and conditions of the licensing document or equivalent authorization, except any such terms and conditions which may be inconsistent with article 33.1-10;
- d. The out-of-state licensee supplies any other information necessary to show compliance with article 33.1-10; and
- e. The out-of-state licensee shall not transfer or dispose of TENORM possessed or used under the general license, except by transfer to a person:
 - (1) Specifically licensed by the department or by another licensing state to receive such TENORM; or
 - (2) Exempt from the requirements for a license for such TENORM under section 33.1-10-23-04.
- 2. The department may withdraw, limit, or qualify its acceptance of any specific license or equivalent authorization issued by a licensing state, or any product distributed pursuant to such license or equivalent authorization, if the department determines that, had the out-of-state licensee been licensed by North Dakota, the licensee's license would have been subject to action under section 33.1-10-23-22.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-25. Financial assurance arrangements.

Each licensee or applicant for a specific license shall post with the department financial assurance, or security, to ensure the protection of the public health and safety and the environment in the event of abandonment, default, or other inability or unwillingness of the licensee to meet the requirements of article 33.1-10 and North Dakota Century Code chapter 23.1-03. Financial assurance arrangements shall:

- 1. Consist of surety bonds, government securities, irrevocable letters of credit, corporate guarantees, insurance, state funds, or any combination of these;
- 2. Be in an amount sufficient to meet the applicant's or licensee's obligations under article 33.1-10 and North Dakota Century Code chapter 23.1-03 and shall be based upon department approved cost estimates;

3. Be established prior to issuance of the license or the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the facility;
4. Be continuous for the duration of the license and for a period coincident with the applicant or licensee's responsibility under article 33.1-10 and North Dakota Century Code chapter 23.1-03;
5. Be available in North Dakota subject to judicial process and execution in the event required for the purposes set forth; and
6. Be established within ninety days of the initial effective date of this chapter for licenses in effect on that date.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-26. Acceptable surface contamination levels for TENORM.

1. Where surface contamination by both alpha and beta-gamma emitting nuclides exists, the limits established for alpha and beta-gamma emitting nuclides shall apply independently.
2. As used in this section, "disintegrations per minute" means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
3. Average contamination level.
 - a. For surface contamination by alpha emitting nuclides, the average contamination level shall not exceed five thousand disintegrations per minute per one hundred square centimeters of surface area.
 - b. For surface contamination by beta-gamma emitting nuclides, the average contamination level shall not exceed five thousand disintegrations per minute per one hundred square centimeters of surface area.
 - c. Measurements of average contamination level shall not be averaged over more than one square meter. For objects of less surface area, the average shall be derived for each object.
 - d. The average radiation levels associated with surface contamination resulting from beta-gamma emitters shall not exceed two microgray per hour [two tenths millirad per hour] at one centimeter and ten microgray per hour [one millirad per hour] at one centimeter, respectively, measured through not more than seven milligrams per square centimeter of total absorber.
4. Maximum contamination level.

- a. For surface contamination by alpha emitting nuclides, the maximum contamination level shall not exceed fifteen thousand disintegrations per minute per one hundred square centimeters of surface area.
- b. For surface contamination by beta-gamma emitting nuclides, the maximum contamination level shall not exceed fifteen thousand disintegrations per minute per one hundred square centimeters of surface area.
- c. The maximum contamination level applies to an area of not more than one hundred square centimeters.
- d. The maximum radiation levels associated with surface contamination resulting from beta-gamma emitters shall not exceed two microgray per hour [two tenths millirad per hour] at one centimeter and ten microgray per hour [one millirad per hour] at one centimeter, respectively, measured through not more than seven milligrams per square centimeter of total absorber.

5. Limits on removable contamination.

- a. For surface contamination by alpha emitting nuclides, the removable contamination shall not exceed one thousand disintegrations per minute per one hundred square centimeters of surface area.
- b. For surface contamination by beta-gamma emitting nuclides, the removable contamination shall not exceed one thousand disintegrations per minute per one hundred square centimeters of surface area.
- c. Measurements of average contamination level shall not be averaged over more than one square meter. For objects of less surface area, the average shall be derived for each object.
- d. The amount of removable radioactive material per one hundred square centimeters of surface area shall be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of surface area A (where A is less than one hundred square centimeters) is determined, the entire surface shall be wiped and the contamination level multiplied by the quantity [one hundred divided by A] to convert to a "per one hundred square centimeter" basis.
- e. The maximum radiation levels associated with surface contamination resulting from beta-gamma emitters shall not exceed two microgray per hour [two tenths millirad per hour] at one centimeter and ten microgray per hour [one millirad per hour] at one centimeter, respectively, measured through not more than seven milligrams per square centimeter of total absorber.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-27. Specific licenses - Radiation protection program required.

1. A licensee shall appoint a radiation safety officer, who agrees, in writing, to be responsible for implementing the radiation protection program. The licensee, through the radiation safety officer, shall ensure that radiation safety activities are being performed in accordance with licensee-approved procedures and regulatory requirements.
2. A licensee shall establish, in writing, the radiation safety officer's authority, duties, and responsibilities.
3. A licensee shall provide the radiation safety officer sufficient authority, organizational freedom, time, resources, and management prerogative, to:
 - a. Identify radiation safety problems;
 - b. Initiate, recommend, or provide corrective actions;
 - c. Stop unsafe operations; and
 - d. Verify implementation of corrective actions.
4. A licensee shall retain a record of actions taken under subsections 1 and 2 of this section for five years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

33.1-10-23-28. Radiation safety officer - Qualifications.

1. Except for licenses exclusive to the transport of TENORM waste, the specific licensee shall require an individual fulfilling the responsibilities of the radiation safety officer as provided in section 33.1-10-23-27 to be an individual who has completed a department approved training program consisting of forty hours of classroom training in the following areas:
 - a. Characteristics of radiation;
 - b. Units of radiation dose and quantity of radioactivity;
 - c. Hazards of exposure to radiation;
 - d. Radiation detection and measurement;
 - e. Minimizing radiation exposure (time, distance, shielding, and respiratory precautions);
 - f. Use and types of personnel-monitoring equipment;
 - g. Proper use of protective equipment; and
 - h. Transportation of licensed material.

2. For licenses exclusive to the transport of TENORM waste, the licensee shall require an individual fulfilling the responsibilities of the radiation safety officer to be an individual who has completed a department approved training program consisting of eight hours of classroom training in the following areas:

a. Characteristics of radiation;

b. Units of radiation dose and quantity of radioactivity;

c. Hazards of exposure to radiation;

d. Radiation detection and measurement;

e. Minimizing radiation exposure (time, distance, shielding, and respiratory precautions);

f. Use and types of personnel-monitoring equipment;

g. Proper use of protective equipment; and

h. Transportation of licensed material.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04; S.L. 2017, ch. 199, § 18

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-15 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-15

AIR POLLUTION CONTROL

Chapter

<u>33.1-15-01</u>	<u>General Provisions</u>
<u>33.1-15-02</u>	<u>Ambient Air Quality Standards</u>
<u>33.1-15-03</u>	<u>Restriction of Emission of Visible Air Contaminants</u>
<u>33.1-15-04</u>	<u>Open Burning Restrictions</u>
<u>33.1-15-05</u>	<u>Emissions of Particulate Matter Restricted</u>
<u>33.1-15-06</u>	<u>Emissions of Sulfur Compounds Restricted</u>
<u>33.1-15-07</u>	<u>Control of Organic Compounds Emissions</u>
<u>33.1-15-08</u>	<u>Control of Air Pollution From Vehicles and Other Internal Combustion Engines</u>
<u>33.1-15-09</u>	<u>[Reserved]</u>
<u>33.1-15-10</u>	<u>Control of Pesticides</u>
<u>33.1-15-11</u>	<u>Prevention of Air Pollution Emergency Episodes</u>
<u>33.1-15-12</u>	<u>Standards of Performance for New Stationary Sources</u>
<u>33.1-15-13</u>	<u>Emission Standards for Hazardous Air Pollutants</u>
<u>33.1-15-14</u>	<u>Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate</u>
<u>33.1-15-15</u>	<u>Prevention of Significant Deterioration of Air Quality</u>
<u>33.1-15-16</u>	<u>Restriction of Odorous Air Contaminants</u>
<u>33.1-15-17</u>	<u>Restriction of Fugitive Emissions</u>
<u>33.1-15-18</u>	<u>Stack Heights</u>
<u>33.1-15-19</u>	<u>Visibility Protection</u>
<u>33.1-15-20</u>	<u>Control of Emissions From Oil and Gas Well Production Facilities</u>
<u>33.1-15-21</u>	<u>Acid Rain Program</u>
<u>33.1-15-22</u>	<u>Emissions Standards for Hazardous Air Pollutants for Source Categories</u>
<u>33.1-15-23</u>	<u>Fees</u>
<u>33.1-15-24</u>	<u>Standards for Lead-Based Paint Activities</u>
<u>33.1-15-25</u>	<u>Regional Haze Requirements</u>

CHAPTER 33.1-15-01
GENERAL PROVISIONS

Section

<u>33.1-15-01-01</u>	<u>Purpose</u>
<u>33.1-15-01-02</u>	<u>Scope</u>
<u>33.1-15-01-03</u>	<u>Authority</u>
<u>33.1-15-01-04</u>	<u>Definitions</u>
<u>33.1-15-01-05</u>	<u>Abbreviations</u>
<u>33.1-15-01-06</u>	<u>Entry Onto Premises - Authority</u>
<u>33.1-15-01-07</u>	<u>Variances</u>
<u>33.1-15-01-08</u>	<u>Circumvention</u>

- 33.1-15-01-09 Severability
- 33.1-15-01-10 Land Use Plans and Zoning Regulations
- 33.1-15-01-11 [Reserved]
- 33.1-15-01-12 Measurement of Emissions of Air Contaminants
- 33.1-15-01-13 Shutdown and Malfunction of an Installation - Requirement for Notification
- 33.1-15-01-14 Time Schedule for Compliance
- 33.1-15-01-15 Prohibition of Air Pollution
- 33.1-15-01-16 Confidentiality of Records
- 33.1-15-01-17 Enforcement
- 33.1-15-01-18 Compliance Certifications

33.1-15-01-01. Purpose.

It is the purpose of these air quality standards and emission regulations to state such requirements as shall be required to achieve and maintain the best air quality possible, consistent with the best available control technology, to protect human health, welfare, and property to prevent injury to plant and animal life, to promote the economic and social development of this state, to foster the comfort and convenience for the people, and to facilitate the enjoyment of the natural attractions of this state.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-02; S.L. 2017, ch. 199, § 21

33.1-15-01-02. Scope.

These air quality standards and emission regulations apply to any source or emission existing partially or wholly within North Dakota.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-03. Authority.

The department of environmental quality has been authorized to provide and administer this article under the provisions of North Dakota Century Code chapter 23.1-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-04. Definitions.

As used in this article, except as otherwise specifically provided or when the context indicates otherwise, the following words shall have the meanings ascribed to them in this section:

1. "Act" means North Dakota Century Code chapter 23.1-06.
2. "Air contaminant" means any solid, liquid, gas, or odorous substance or any combination thereof emitted to the ambient air.

3. "Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as is or may be injurious to human health, welfare, or property or animal or plant life, or which unreasonably interferes with the enjoyment of life or property.
4. "Ambient air" means the surrounding outside air.
5. "ASME" means the American society of mechanical engineers.
6. "Coal conversion facility" means any of the following:
 - a. An electrical generating plant, and all additions thereto, which processes or converts coal from its natural form into electrical power and which has at least one single electrical energy generation unit with a generator nameplate capacity of twenty-five megawatts or more.
 - b. A plant, and all additions thereto, which processes or converts coal from its natural form into a form substantially different in chemical or physical properties, including coal gasification, coal liquefaction, and the manufacture of fertilizer and other products and which uses or is designed to use over five hundred thousand tons of coal per year.
 - c. A coal beneficiation plant, and all additions thereto, which improve the physical, environmental, or combustion qualities of coal and are built in conjunction with a facility defined in subdivision a or b.
7. "Control equipment" means any device or contrivance which prevents or reduces emissions.
8. "Department" means the department of environmental quality.
9. "Emission" means a release of air contaminants into the ambient air.
10. "Excess emissions" means the release of an air contaminant into the ambient air in excess of an applicable emission limit or emission standard specified in this article or a permit issued pursuant to this article.
11. "Existing" means equipment, machines, devices, articles, contrivances, or installations which are in being on or before July 1, 1970, unless specifically designated within this article; except that any existing equipment, machine, device, contrivance, or installation which is altered, repaired, or rebuilt after July 1, 1970, must be reclassified as "new" if such alteration, rebuilding, or repair results in the emission of an additional or greater amount of air contaminants.
12. "Federally enforceable" means all limitations and conditions which are enforceable by the administrator of the United States environmental protection agency, including those requirements developed pursuant to title 40, Code of Federal Regulations, parts 60 and 61, requirements within any applicable state implementation plan, any permit requirements established pursuant to title 40, Code of Federal Regulations, 52.21 or under regulations approved pursuant to title 40, Code of Federal Regulations, part 51, subpart I, including operating permits issued under a United States environmental protection agency-approved program that is incorporated into the state implementation plan and expressly requires adherence to any permit issued under such program.

13. "Fuel burning equipment" means any furnace, boiler apparatus, stack, or appurtenances thereto used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer.
14. "Fugitive emissions" means solid airborne particulate matter, fumes, gases, mist, smoke, odorous matter, vapors, or any combination thereof generated incidental to an operation process procedure or emitted from any source other than through a well-defined stack or chimney.
15. "Garbage" means putrescible animal and vegetable wastes resulting from the handling, preparation, cooking, and consumption of food, including wastes from markets, storage facilities, handling, and sale of produce and other food products.
16. "Hazardous waste" has the same meaning as given by chapter 33.1-24-02.
17. "Heat input" means the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value to be used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater.
18. "Incinerator" means any article, machine, equipment, device, contrivance, structure, or part of a structure used for the destruction of garbage, rubbish, or other wastes by burning or to process salvageable material by burning.
19. "Industrial waste" means solid waste that is not a hazardous waste regulated under North Dakota Century Code chapter 23.1-04, generated from the combustion or gasification of municipal waste and from industrial and manufacturing processes. The term does not include municipal waste or special waste.
20. "Inhalable particulate matter" means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers.
21. "Installation" means any property, real or personal, including, but not limited to, processing equipment, manufacturing equipment, fuel burning equipment, incinerators, or any other equipment, or construction, capable of creating or causing emissions.
22. "Multiple chamber incinerator" means any article, machine, equipment, contrivance, structure, or part of a structure used to burn combustible refuse, consisting of two or more refractory lined combustion furnaces in series physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate parameters necessary for maximum combustion of the material to be burned.
23. "Municipal waste" means solid waste that includes garbage, refuse, and trash generated by households, motels, hotels, and recreation facilities, by public and private facilities, and by commercial, wholesale, and private and retail businesses. The term does not include special waste or industrial waste.
24. "New" means equipment, machines, devices, articles, contrivances, or installations built or installed on or after July 1, 1970, unless specifically designated within this article, and installations existing at said stated time which are later altered, repaired, or rebuilt and result in the emission of an additional or greater amount of air contaminants.

25. "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
26. "Open burning" means the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through an adequate stack, duct, or chimney.
27. "Particulate matter" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than one hundred micrometers.
28. "Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air.
29. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof and any legal successor, representative agent, or agency of the foregoing.
30. "Pesticide" includes:
- a. Any agent, substance, or mixture of substances intended to prevent, destroy, control, or mitigate any insect, rodent, nematode, predatory animal, snail, slug, bacterium, weed, and any other form of plant or animal life, fungus, or virus, that may infect or be detrimental to persons, vegetation, crops, animals, structures, or households or be present in any environment or which the department may declare to be a pest, except those bacteria, fungi, protozoa, or viruses on or in living man or other animals;
 - b. Any agent, substance, or mixture of substances intended to be used as a plant regulator, defoliant, or desiccant; and
 - c. Any other similar substance so designated by the department, including herbicides, insecticides, fungicides, nematocides, molluscicides, rodenticides, lampreycides, plant regulators, gametocides, post-harvest decay preventatives, and antioxidants.
31. "Petroleum refinery" means an installation that is engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum, or through the redistillation, cracking, or reforming of unfinished petroleum derivatives.
32. "PM_{2.5}" means particulate matter with an aerodynamic diameter less than or equal to a nominal two and five-tenths micrometers.
33. "PM₁₀" means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers.
34. "PM₁₀ emissions" means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal ten micrometers emitted to the ambient air.
35. "Pipeline quality natural gas" means natural gas that contains two grains, or less, of sulfur per one hundred standard cubic feet [2.83 cubic meters].
36. "Premises" means any property, piece of land or real estate, or building.

37. "Process weight" means the total weight of all materials introduced into any specific process which may cause emissions. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.
38. "Process weight rate" means the rate established as follows:
- a. For continuous or longrun steady state operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.
 - b. For cyclical or batch operations, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period. If the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.
39. "Radioactive waste" means solid waste containing radioactive material and subject to the requirements of article 33.1-10.
40. "Refuse" means any municipal waste, trade waste, rubbish, or garbage, exclusive of industrial waste, special waste, radioactive waste, hazardous waste, and infectious waste.
41. "Rubbish" means nonputrescible solid wastes consisting of both combustible and noncombustible wastes. Combustible rubbish includes paper, rags, cartons, wood, furniture, rubber, plastics, yard trimmings, leaves, and similar materials. Noncombustible rubbish includes glass, crockery, cans, dust, metal furniture, and like materials which will not burn at ordinary incinerator temperatures (one thousand six hundred to one thousand eight hundred degrees Fahrenheit [1144 degrees Kelvin to 1255 degrees Kelvin]).
42. "Salvage operation" means any operation conducted in whole or in part for the salvaging or reclaiming of any product or material.
43. "Smoke" means small gasborne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, ash, and other combustible material, that form a visible plume in the air.
44. "Source" means any property, real or personal, or person contributing to air pollution.
45. "Source operation" means the last operation preceding emission which operation:
- a. Results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and
 - b. Is not an air pollution abatement operation.
46. "Special waste" means solid waste that is not a hazardous waste regulated under North Dakota Century Code chapter 23.1-04 and includes waste generated from energy conversion facilities; waste from crude oil and natural gas exploration and production; waste from mineral and or mining, beneficiation, and extraction; and waste

generated by surface coal mining operations. The term does not include municipal waste or industrial waste.

47. "Stack or chimney" means any flue, conduit, or duct arranged to conduct emissions.

48. "Standard conditions" means a dry gas temperature of sixty-eight degrees Fahrenheit [293 degrees Kelvin] and a gas pressure of fourteen and seven-tenths pounds per square inch absolute [101.3 kilopascals].

49. "Submerged fill pipe" means any fill pipe the discharge opening of which is entirely submerged when the liquid level is six inches [15.24 centimeters] above the bottom of the tank; or when applied to a tank which is loaded from the side, means any fill pipe the discharge opening of which is entirely submerged when the liquid level is one and one-half times the fill pipe diameter in inches [centimeters] above the bottom of the tank.

50. "Trade waste" means solid, liquid, or gaseous waste material resulting from construction or the conduct of any business, trade, or industry, or any demolition operation, including wood, wood containing preservatives, plastics, cartons, grease, oil, chemicals, and cinders.

51. "Trash" means refuse commonly generated by food warehouses, wholesalers, and retailers which is comprised only of nonrecyclable paper, paper products, cartons, cardboard, wood, wood scraps, and floor sweepings and other similar materials. Trash may not contain more than five percent by volume of each of the following: plastics, animal and vegetable materials, or rubber and rubber scraps. Trash must be free of grease, oil, pesticides, yard waste, scrap tires, infectious waste, and similar substances.

52. "Volatile organic compounds" means the definition of volatile organic compounds in 40 Code of Federal Regulations 51.100(s) as it exists on July 1, 2015, which is incorporated by reference.

53. "Waste classification" means the seven classifications of waste as defined by the incinerator institute of America and American society of mechanical engineers.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-05. Abbreviations.

The abbreviations used in this article have the following meanings:

<u>A</u>	:	<u>ampere</u>
<u>A.S.T.M.</u>	:	<u>American Society for Testing and Materials</u>
<u>Btu</u>	:	<u>British thermal unit</u>
<u>°C</u>	:	<u>degree Celsius (centigrade)</u>
<u>cal</u>	:	<u>calorie</u>
<u>CdS</u>	:	<u>cadmium sulfide</u>
<u>cfm</u>	:	<u>cubic feet per minute</u>

<u>CFR</u>	-	<u>code of federal regulations</u>
<u>cu ft</u>	-	<u>cubic feet</u>
<u>CO</u>	-	<u>carbon monoxide</u>
<u>CO₂</u>	-	<u>carbon dioxide</u>
<u>dcf</u>	-	<u>dry cubic feet</u>
<u>dcm</u>	-	<u>dry cubic meter</u>
<u>dscf</u>	-	<u>dry cubic feet at standard conditions</u>
<u>dscm</u>	-	<u>dry cubic meter at standard conditions</u>
<u>eq</u>	-	<u>equivalents</u>
<u>°F</u>	-	<u>degree Fahrenheit</u>
<u>ft</u>	-	<u>feet</u>
<u>g</u>	-	<u>gram</u>
<u>gal</u>	-	<u>gallon</u>
<u>g eq</u>	-	<u>gram equivalents</u>
<u>gr</u>	-	<u>grain</u>
<u>hr</u>	-	<u>hour</u>
<u>HCl</u>	-	<u>hydrochloric acid</u>
<u>Hg</u>	-	<u>mercury</u>
<u>H₂O</u>	-	<u>water</u>
<u>H₂S</u>	-	<u>hydrogen sulfide</u>
<u>H₂SO₄</u>	-	<u>sulfuric acid</u>
<u>Hz</u>	-	<u>hertz</u>
<u>in.</u>	-	<u>inch</u>
<u>j</u>	-	<u>joule</u>
<u>°K</u>	-	<u>degree Kelvin</u>
<u>k</u>	-	<u>1,000</u>
<u>kg</u>	-	<u>kilogram</u>
<u>l</u>	-	<u>liter</u>
<u>lpm</u>	-	<u>liter per minute</u>
<u>lb</u>	-	<u>pound</u>
<u>m</u>	-	<u>meter</u>
<u>m³</u>	-	<u>cubic meter</u>
<u>meq</u>	-	<u>milliequivalent</u>
<u>min</u>	-	<u>minute</u>
<u>mg</u>	-	<u>milligram - 10⁻³ gram</u>

<u>Mg</u>	-	<u>megagram - 10⁶ gram</u>
<u>ml</u>	-	<u>milliliter - 10⁻³ liter</u>
<u>mm</u>	-	<u>millimeter - 10⁻³ meter</u>
<u>mol</u>	-	<u>mole</u>
<u>mol.wt.</u>	-	<u>molecular weight</u>
<u>mV</u>	-	<u>millivolt</u>
<u>N₂</u>	-	<u>nitrogen</u>
<u>N</u>	-	<u>newton</u>
<u>ng</u>	-	<u>nanogram - 10⁻⁹ gram</u>
<u>nm</u>	-	<u>nanometer - 10⁻⁹ meter</u>
<u>NO</u>	-	<u>nitric oxide</u>
<u>NO₂</u>	-	<u>nitrogen dioxide</u>
<u>NO_x</u>	-	<u>nitrogen oxides</u>
<u>O₂</u>	-	<u>oxygen</u>
<u>Pa</u>	-	<u>pascal</u>
<u>PM</u>	-	<u>particulate matter</u>
<u>PM_{2.5}</u>	-	<u>particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers</u>
<u>PM₁₀</u>	-	<u>particulate matter with an aerodynamic diameter less than or equal to 10 micrometers</u>
<u>ppb</u>	-	<u>parts per billion</u>
<u>ppm</u>	-	<u>parts per million</u>
<u>psia</u>	-	<u>pounds per square inch absolute</u>
<u>psig</u>	-	<u>pounds per square inch gauge</u>
<u>°R</u>	-	<u>degree Rankine</u>
<u>s-sec</u>	-	<u>second</u>
<u>scf</u>	-	<u>cubic feet at standard conditions</u>
<u>scfh</u>	-	<u>cubic feet per hour at standard conditions</u>
<u>scm</u>	-	<u>cubic meters at standard conditions</u>
<u>scmh</u>	-	<u>cubic meters per hour at standard conditions</u>
<u>SO₂</u>	-	<u>sulfur dioxide</u>
<u>SO₃</u>	-	<u>sulfur trioxide</u>
<u>SO_x</u>	-	<u>sulfur oxides</u>
<u>sq ft</u>	-	<u>square feet</u>
<u>std</u>	-	<u>at standard conditions</u>

<u>TSP</u>	:	<u>total suspended particulate</u>
<u>µg</u>	:	<u>microgram - 10⁻⁶ gram</u>
<u>V</u>	:	<u>volt</u>
<u>W</u>	:	<u>watt</u>
<u>Ω</u>	:	<u>ohm</u>

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-06. Entry onto premises - Authority.

Entry onto premises and onsite inspection shall be made pursuant to North Dakota Century Code section 23.1-06-11.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-11; S.L. 2017, ch. 199, § 21

33.1-15-01-07. Variances.

1. Where upon written application of the responsible person or persons the department finds that by reason of exceptional circumstances strict conformity with any provisions of this article would cause undue hardship, would be unreasonable, impractical, or not feasible under the circumstances, the department may permit a variance from this article upon such conditions and within such time limitations as it may prescribe for prevention, control, or abatement of air pollution in harmony with the intent of the state and any applicable federal laws.

2. No variance may permit or authorize the creation or continuation of a public nuisance, or a danger to public health or safety.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-08. Circumvention.

No person shall cause or permit the installation or use of any device or any means which conceals or dilutes an emission of air contaminant which would otherwise violate this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-09. Severability.

If any provision of this article or the application thereof to any person or circumstances is held to be invalid, such invalidity shall not affect other provisions or application of any other part of this article which can be given effect without the invalid provision or application, and to this

end the provisions of this article and the various applications thereof are declared to be severable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-10. Land use plans and zoning regulations.

1. Planning agency land use plans.

a. The department will provide to planning agencies, for use in preparing land use plans, information concerning:

- (1) Air quality.
- (2) Air pollutant emissions.
- (3) Air pollutant meteorology.
- (4) Air quality goals.
- (5) Air pollution effects.

b. The department will review all land use plans and prepare recommendations for consideration in the plan adoption process.

2. Zoning agency regulations.

a. The department will provide to zoning control agencies, for use in preparing regulations, information concerning:

- (1) Air quality.
- (2) Air pollutant emissions.
- (3) Air pollution meteorology.
- (4) Air quality goals.
- (5) Air pollution effects.

b. The department will review all zoning regulations and prepare recommendations for consideration in the regulation adoption process.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-11. [Reserved]

33.1-15-01-12. Measurement of emissions of air contaminants.

1. **Sampling and testing.** The department may reasonably require any person responsible for emission of air contaminants to make or have made tests, at a reasonable time or interval, to determine the emission of air contaminants from any

source, for the purpose of determining whether the person is in violation of any standard under this article or to satisfy other requirements under the North Dakota Century Code chapter 23.1-06. All tests shall be made and the results calculated in accordance with test procedures approved or specified by the department. All tests shall be conducted by reputable, qualified personnel. The department shall be given a copy of the test results in writing and signed by the person responsible for the tests.

The owner or operator of a source shall notify the department using forms supplied by the department, or its equivalent, at least thirty calendar days in advance of any tests of emissions of air contaminants required by the department. Advanced notification for all other testing will be consistent with the requirements of the appropriate regulations but in no case will be less than thirty calendar days. If the owner or operator of a source is unable to conduct the performance test on the scheduled date, the owner or operator of a source shall notify the department as soon as practicable when conditions warrant and shall coordinate a new test date with the department.

Failure to give the proper notification may prevent the department from observing the test. If the department is unable to observe the test because of improper notification, the test results may be rejected.

2. **The department may make tests.** The department may conduct tests of emissions of air contaminants from any source. Upon request of the department, the person responsible for the source to be tested shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-01-13. Shutdown and malfunction of an installation - Requirement for notification.

1. **Maintenance shutdowns.** In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the department at least twenty-four hours prior to the planned shutdown provided that the air contaminating source will be operated while the control equipment is not in service. Such prior notice shall include the following:
 - a. Identification of the specific facility to be taken out of service as well as its location and permit number.
 - b. The expected length of time that the air pollution control equipment will be out of service.
 - c. The nature and estimated quantity of emissions of air pollutants likely to be emitted during the shutdown period.
 - d. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

- e. The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.
- f. Nothing in this subsection shall in any manner be construed as authorizing or legalizing the emission of air contaminants in excess of the rate allowed by this article or a permit issued pursuant to this article.

2. Malfunctions.

- a. When a malfunction in any installation occurs that can be expected to last longer than twenty-four hours and cause the emission of air contaminants in violation of this article or other applicable rules and regulations, the person responsible for such installation shall notify the department of such malfunction as soon as possible during normal working hours. The notification must contain a statement giving all pertinent facts, including the estimated duration of the breakdown. The department shall be notified when the condition causing the malfunction has been corrected.
- b. Immediate notification to the department is required for any malfunction that would threaten health or welfare, or pose an imminent danger. During normal working hours the department can be contacted at 701-328-5188. After hours the department can be contacted through the twenty-four-hour state radio emergency number 1-800-472-2121. If calling from out of state, the twenty-four-hour number is 701-328-9921.
- c. Unavoidable malfunction. The owner or operator of a source who believes any excess emissions resulted from an unavoidable malfunction shall submit a written report to the department which includes evidence that:
 - (1) The excess emissions were caused by a sudden, unavoidable breakdown of technology that was beyond the reasonable control of the owner or operator.
 - (2) The excess emissions could not have been avoided by better operation and maintenance, did not stem from an activity or event that could have been foreseen and avoided or planned for.
 - (3) To the extent practicable, the source maintained and operated the air pollution control equipment and process equipment in a manner consistent with good practice for minimizing emissions, including minimizing any bypass emissions.
 - (4) Any necessary repairs were made as quickly as practicable, using off-shift labor and overtime as needed and possible.
 - (5) All practicable steps were taken to minimize the potential impact of the excess emissions on ambient air quality.
 - (6) The excess emissions are not part of a recurring pattern that may have been caused by inadequate operation or maintenance or inadequate design of the malfunctioning equipment.

The report shall be submitted within thirty days of the end of the calendar quarter in which the malfunction occurred or within thirty days of a written request by the department, whichever is sooner.

The burden of proof is on the owner or operator of the source to provide sufficient information to demonstrate that an unavoidable equipment malfunction occurred. The department may elect not to pursue enforcement action after considering whether excess emissions resulted from an unavoidable equipment malfunction. The department will evaluate, on a case-by-case basis, the information submitted by the owner or operator to determine whether to pursue enforcement action.

3. **Continuous emission monitoring system failures.** When a failure of a continuous emission monitoring system occurs, an alternative method for measuring or estimating emissions must be undertaken as soon as possible. The owner or operator of a source that uses an alternative method shall have the burden of demonstrating that the method is accurate. Timely repair of the emission monitoring system must be made. The provisions of this subsection do not apply to sources that are subject to monitoring requirements in chapter 33.1-15-21.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-01-14. Time schedule for compliance.

Except as otherwise specified, compliance with the provisions of this article shall be according to the following time schedule:

1. **New installations.** Every new installation shall comply as of going into continuous routine operation for its intended purpose.
2. **Existing installations.** Every existing installation shall be in compliance as of July 1, 1970, unless the owner or person responsible for the operation of the installation shall have submitted to the department in a form and manner satisfactory to it, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the department may require. If approved by the department, such date will be the date on which the person shall comply. The department may require persons submitting such program to submit subsequent periodic reports on progress in achieving compliance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-01-15. Prohibition of air pollution.

1. No person shall permit or cause air pollution, as defined in section 33.1-15-01-04.
2. Nothing in any other part of this article concerning emission of air contaminants or any other regulation relating to air pollution shall in any manner be construed as authorizing or legalizing the creation or maintenance of air pollution.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-01-16. Confidentiality of records.

1. **Public inspection.** Any record, report, or information obtained or submitted pursuant to this article will be available to the public for inspection and copying during normal working hours unless the department certifies that the information is confidential. Anyone requesting department assistance in collecting, copying, certifying, or mailing public information must tender, in advance, the reasonable cost of those services.
2. **Information submitted as trade secrets.** The department may certify records, reports, or information, or particular part thereof, other than emission data, as confidential upon a showing that the information would, if made public, divulge methods or processes entitled to protection as trade secrets. Any person submitting trade secret information must present the information to the department in a sealed envelope marked "CONFIDENTIAL". Each page of any document claimed confidential must be clearly marked with the word "CONFIDENTIAL". The submission must contain two parts:
 - a. The material claimed to contain trade secret information; and
 - b. A request for confidential treatment including:
 - (1) All information for which no claim is being made;
 - (2) An affidavit stating how and why the information fulfills the conditions of confidentiality under this subsection; and
 - (3) An index to and summary of the information submitted which is suitable for release to the public.
3. **Accepted trade secret claims.** All information which meets the test of subsection 2 must be marked by the department as "ACCEPTED" and protected as confidential information.
4. **Rejected trade secret claims.** If the department determines that information submitted pursuant to subsection 2 does not meet the criteria of that subsection for confidential treatment, the department shall promptly notify the person submitting the information of that determination. The department shall in that event give that person at least twenty days in which to:
 - a. Accept the determination of the department;
 - b. Request that the information be returned to the person;
 - c. Further justify the contention that the information deserves protection as a trade secret; or
 - d. Further limit the scope of information for which a claim of confidentiality is made.

If the person who submitted the information fails within the time period allowed by the department to demonstrate satisfactorily to the department that the information in the form presented qualifies for confidential treatment, the department shall promptly notify

that person of that determination. If the person submitting the information did not request that it be returned, the department shall mark the information "REJECTED" and treat it as public information. The department's action on a reconsideration constitutes final agency action for purposes of judicial review. Appeal of this action must be to an appropriate district court.

5. **Appeal of nondisclosure claims.** Any person who identifies and tenders the reasonable cost of collecting, copying, certifying, and mailing particular information held by the department under subsection 2 may file with the department a petition for reconsideration stating how and why the public's interest would be better served by the release of the requested information than by its retention as confidential by the department. The department shall then reconsider the confidential status of the information. The department action on a petition for reconsideration constitutes final agency action for purposes of judicial review. Appeal of the department's action must be to an appropriate district court.
6. **Retention of confidential information.** All information which is accepted by the department as confidential must be stored in locked filing cabinets. Only those personnel of the department specifically designated by the department shall have access to the information contained therein. The department may not designate any person to have access to confidential information unless that person requires such access in order to carry out that person's responsibilities and duties. No person may disclose any confidential information except in accordance with the provisions of this section. No copies may be made except as strictly necessary for internal department use or as specified in subsection 8.
7. **Maintenance of log.** Persons designated by the department to maintain confidential files as herein provided shall maintain a log showing the persons who have had access to the confidential files and the date of such access.
8. **Transmittals of confidential information.** As necessary, confidential information acquired by the department under the provisions of the act, or this article, may be transmitted to such federal, state, or local agencies, when necessary for purposes of administration of any federal, state, or local air pollution control laws, which make an adequate showing of need to the department, provided that such transmittal is made under a continuing assurance of confidentiality.
9. **Relationship to issuance of permits.** The department may not process any application for a permit to construct or operate pursuant to chapter 33.1-15-14 or 33.1-15-15 until final agency action on confidential trade secret claims has been completed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-12; S.L. 2017, ch. 199, § 21

33.1-15-01-17. Enforcement.

1. **Enforcement action will be consistent with procedures as approved by the United States environmental protection agency.**

2. Notwithstanding any other provision in this article, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of this article.

a. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

(1) A compliance assurance monitoring protocol approved for the source pursuant to subsection 10 of section 33.1-15-14-06.

(2) A monitoring method approved for the source pursuant to paragraph 3 of subdivision a of subsection 5 of section 33.1-15-14-06 and incorporated in a federally enforceable title V permit to operate.

(3) Compliance test methods specified in this article.

b. The following testing, monitoring, and information-gathering methods are presumptively credible testing, monitoring, or information-gathering methods:

(1) Any federally enforceable monitoring or testing methods, including those under title 40, Code of Federal Regulations, parts 50, 51, 60, 61, 63, and 75.

(2) Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in paragraph 1 or in subdivision a.

3. a. No person may knowingly make a false statement, representation, or certification in any application, record, report, plan, or other document filed or required under this article.

b. No person may knowingly falsify, tamper with, or provide inaccurate information regarding a monitoring device or method required under this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-01-18. Compliance certifications.

Notwithstanding any other provision in this article, for the purpose of submission of compliance certifications the owner or operator is not prohibited from using the following in addition to any specified compliance methods:

1. A compliance assurance monitoring protocol approved for the source pursuant to subsection 10 of section 33.1-15-14-06.

2. Any other monitoring method approved for the source under paragraph 3 of subdivision a of subsection 5 of section 33.1-15-14-06 and incorporated into a federally enforceable title V permit to operate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-02
AMBIENT AIR QUALITY STANDARDS

Section

<u>33.1-15-02-01</u>	<u>Scope</u>
<u>33.1-15-02-02</u>	<u>Purpose</u>
<u>33.1-15-02-03</u>	<u>Air Quality Guidelines</u>
<u>33.1-15-02-04</u>	<u>Ambient Air Quality Standards</u>
<u>33.1-15-02-05</u>	<u>Methods of Sampling and Analysis</u>
<u>33.1-15-02-06</u>	<u>Reference Conditions</u>
<u>33.1-15-02-07</u>	<u>Concentrations of Air Contaminants in the Ambient Air Restricted</u>

33.1-15-02-01. Scope.

The ambient air quality standards as presented in this chapter pertain to the ambient air within the boundaries of North Dakota.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-02. Purpose.

It is the purpose of these air quality standards to set forth levels of air quality for the maintenance of public health and welfare and to provide guidance to governmental and other parties interested in abating air pollution. Since the ambient air in North Dakota is generally cleaner than these standards, the standards are not a permit for the unnecessary degradation of air quality.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-03. Air quality guidelines.

In keeping with the purpose of these ambient air quality standards, the quality should be such that:

1. The public health will be protected including sensitive or susceptible segments of the population.
2. Concentrations of pollutants will not cause public nuisance or annoyance.
3. Agricultural crops, animals, forest, and other plant life will be protected.
4. Visibility will be protected.
5. Metals or other materials will be protected from abnormal corrosion or damage.
6. Fabrics will not be soiled, deteriorated, or their colors affected.
7. Natural scenery will not be obscured.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-04. Ambient air quality standards.

1. **Particulates and gases.** The standards of ambient air quality listed in table 1 and table 2 define the limits of air contamination by particulates and gases. Any air contaminant which exceeds these limits is hereby declared to be unacceptable and requires air pollution control measures. The stated limits include normal background levels of particulates and gases.
2. **Radioactive substances.** The ambient air shall not contain any radioactive substances exceeding the concentrations specified in article 33.1-10.
3. **Other air contaminants.** The ambient air shall not contain air contaminants in concentrations that would be injurious to human health or well-being or unreasonably interfere with the enjoyment of property or that would injure plant or animal life. The department may establish, on a case-by-case basis, specific limits of concentration for these contaminants.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-05. Methods of sampling and analysis.

Air contaminants listed under table 1 shall be measured by the method or methods listed in title 40, Code of Federal Regulations, parts 50 and 53. Hydrogen sulfide sampling equipment and methods must be approved by the department. Hydrogen sulfide analyzers must be designed for use as ambient air quality monitors and must be capable of meeting performance specifications as determined by the department.

The sampling and analytical procedures employed and the number, duration, and location of samples to be taken to measure ambient levels of air contaminants shall be consistent with obtaining results which are precise, accurate, and representative of the conditions being evaluated.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-06. Reference conditions.

The standards of ambient air quality listed in table 1 are corrected to a reference temperature of twenty-five degrees Celsius [298 degrees Kelvin] and a reference pressure of seven hundred sixty millimeters of mercury [101.3 kilopascals].

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-02-07. Concentrations of air contaminants in the ambient air restricted.

1. No person may cause or permit the emission of contaminants to the ambient air from any source in such a manner and amount that causes or contributes to a violation in the ambient air of those standards stated in section 33.1-15-02-04.
2. Nothing in any other part or section of this article may in any manner be construed as authorizing or legalizing the emission of air contaminants in such manner as prohibited in subsection 1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

Table 1. AMBIENT AIR QUALITY STANDARDS

<u>Air Contaminants</u>	<u>Standards</u> <u>(Maximum Permissible Concentrations)</u>
<u>Inhalable Particulates</u> <u>PM₁₀</u>	<u>150 micrograms per cubic meter, 24-hour average concentration. The standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter, as determined in accordance with 40 CFR 50, Appendix K, is equal to or less than one.</u>
<u>PM_{2.5}</u>	<u>12.0 micrograms per cubic meter annual arithmetic mean concentration. The standard is met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 12.0 micrograms per cubic meter.</u> <u>35 micrograms per cubic meter 24-hour average concentration. The standard is met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR 50, Appendix N, is less than or equal to 35 micrograms per cubic meter.</u>
<u>Sulfur Dioxide</u>	<u>0.075 parts per million (196 micrograms per cubic meter) 1-hour average concentration. The standard is met when the 3-year average of the annual 99th percentile of the daily maximum 1-hour average concentration is less than or equal to 0.075 parts per million, as determined in accordance with 40 CFR 50, Appendix T.</u> <u>0.5 parts per million (1309 micrograms per cubic meter of air) maximum 3-hour concentration, not to be exceeded more than once per calendar year.</u>
<u>Hydrogen Sulfide</u>	<u>10.0 parts per million (14 milligrams per cubic meter of air), maximum instantaneous (ceiling) concentration not to be exceeded</u> <u>0.20 parts per million (280 micrograms per cubic meter of air), maximum 1-hour average concentration not to be exceeded more than once per month</u> <u>0.10 parts per million (140 micrograms per cubic meter of air), maximum 24-hour average concentration not to be exceeded more than once per year</u>

<u>Air Contaminants</u>	<u>Standards</u> (Maximum Permissible Concentrations)
	<u>0.02</u> parts per million (28 micrograms per cubic meter of air), maximum arithmetic mean concentration averaged over three consecutive months
<u>Carbon Monoxide</u>	<u>9</u> parts per million (10 milligrams per cubic meter of air), maximum 8-hour concentration not to be exceeded more than once per year
	<u>35</u> parts per million (40 milligrams per cubic meter of air), maximum 1-hour concentration not to be exceeded more than once per year
<u>Ozone</u>	<u>0.075</u> parts per million (147 micrograms per cubic meter of air) daily maximum 8-hour average concentration. The standard is met when the three-year average of the annual fourth-highest daily maximum 8-hour average concentration at an ambient air quality monitoring site is less than or equal to 0.075 ppm, as determined in accordance with 40 CFR 50, Appendix P.
<u>Nitrogen Dioxide</u>	<u>0.053</u> parts per million (100 micrograms per cubic meter of air), maximum annual arithmetic mean
	<u>0.100</u> parts per million (188 micrograms per cubic meter) 1-hour average concentration. The standard is met when the 3-year average of the annual 98th percentile of the daily maximum 1-hour average concentration is less than or equal to 0.100 parts per million, as determined in accordance with 40 CFR 50, Appendix S.
<u>Lead</u>	<u>0.15</u> micrograms per cubic meter of air, arithmetic mean averaged over a 3-month rolling period. The standard is met when the maximum 3-month mean concentration for a 3-year period, as determined in accordance with 40 CFR 50, Appendix R, is less than or equal to 0.15 micrograms per cubic meter.

History: Effective _____, 2018.

Table 2. NATIONAL AMBIENT AIR QUALITY STANDARDS

<u>Air Contaminant</u>	<u>Standards</u> <u>(Maximum Permissible Concentrations)</u>
<u>Sulfur oxides</u> <u>(sulfur dioxide)</u>	<u>0.030 parts per million (80 micrograms per cubic meter of air) maximum annual arithmetic mean concentration, not to be exceeded in a calendar year</u>
	<u>0.14 parts per million (365 micrograms per cubic meter of air) maximum 24-hour concentration, not to be exceeded more than once per calendar year</u>

The standards in Table 2 will remain in effect until one year after the effective date of the designation for the one-hour sulfur dioxide standard pursuant to Section 107 of the Federal Clean Air Act except for areas designated nonattainment with respect to the standards in Table 2 and areas not meeting the requirements of a state implementation call with respect to requirements for the national ambient air quality standards in Table 2. The standards in Table 2 will apply to those areas until that area submits, and the environmental protection agency approves, an implementation plan providing for attainment of the one-hour sulfur dioxide standard.

History: Effective _____, 2018.

CHAPTER 33.1-15-03
RESTRICTION OF EMISSION OF VISIBLE AIR CONTAMINANTS

Section

- 33.1-15-03-01 Restrictions Applicable to Existing Installations
- 33.1-15-03-02 Restrictions Applicable to New Installations and All Incinerators
- 33.1-15-03-03 Restrictions Applicable to Fugitive Emissions
- 33.1-15-03-03.1 Restrictions Applicable to Flares
- 33.1-15-03-04 Exceptions
- 33.1-15-03-05 Method of Measurement

33.1-15-03-01. Restrictions applicable to existing installations.

No person may discharge into the ambient air from any single source of emission whatsoever, with the exception of existing incinerators, any air contaminant which exhibits an opacity greater than forty percent except that a maximum of sixty percent opacity shall be permissible for not more than one six-minute period per hour. Provided, however:

1. In consideration of public health and welfare, when it becomes both technically and economically feasible, the source shall comply with visible air contaminant restrictions as outlined in section 33.1-15-03-02 when directed by the department.
2. Any existing source which has installed control technology capable of complying with the visible air contaminant restrictions applicable to new installations shall comply with section 33.1-15-03-02 when directed by the department.
3. If any party is aggrieved by the department's decision as referenced in subsections 1 and 2, that party may request a hearing before the department to review such decision. Such hearing must be conducted according to North Dakota Century Code chapter

28-32. If a hearing is requested, the requirements of section 33.1-15-03-02 are not effective until ordered by the department at the conclusion of the hearing process.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-03-02. Restrictions applicable to new installations and all incinerators.

No person may discharge into the ambient air from any single source of emission whatsoever any air contaminant which exhibits an opacity greater than twenty percent except that a maximum of forty percent opacity is permissible for not more than one six-minute period per hour.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-03-03. Restrictions applicable to fugitive emissions.

No person may discharge into the ambient air from any source of fugitive emissions, as determined or identified by the department, any air contaminant which exhibits an opacity greater than forty percent for more than one six-minute period per hour. Such visible emissions shall have been visibly transported off the property of emission origination and remains visible to an observer positioned off said property when sighting along a line which does not cross the property of emission origination.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-03-03.1. Restrictions applicable to flares.

No person may discharge into the ambient air from any single source of emission whatsoever any air contaminant which exhibits an opacity greater than twenty percent except that a maximum of sixty percent opacity is permissible for not more than one six-minute period per hour.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-03-04. Exceptions.

The provisions of sections 33.1-15-03-01, 33.1-15-03-02, 33.1-15-03-03, and 33.1-15-03-03.1 shall not apply in the following circumstances:

1. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements.

2. When smoke is emitted for the purpose of training or research when approved by the department, including training schools for firefighting personnel.
3. [Reserved]
4. [Reserved]
5. Where fugitive emissions are caused by agricultural activities related to the normal operations of a farm. However, agricultural practices such as tilling of land, application of fertilizers, harvesting of crops, and other activities shall be managed in such a manner as to minimize dust from becoming airborne.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-03-05. Method of measurement.

1. Method 9. Compliance with visible emission standards in chapter 33.1-15-03 shall be determined by conducting observations in accordance with Reference Method 9 of Appendix A to chapter 33.1-15-12. Per hour for Reference Method 9 means any contiguous sixty-minute time period. When Reference Method 9 opacity readings are not available, continuous opacity monitors may be substituted. Per hour for monitors means any sixty-minute period commencing on the hour. The results of continuous monitoring by transmissometer, which indicate that the opacity at the time visible emissions were taken, were not in excess of the standard, are probative but not conclusive evidence of the actual opacity of an emission; provided, that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in Appendix B, has been properly maintained and (at the time of the alleged violation) calibrated, and that the resulting data have not been tampered with in any way.
2. Method 22. When a visible emissions limit is specified in a permit issued in accordance with this article as zero percent opacity except for a certain frequency, compliance shall be determined using Reference Method 22 of Appendix A to chapter 33.1-15-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-04 **OPEN BURNING RESTRICTIONS**

Section

33.1-15-04-01 Refuse Burning Restrictions

33.1-15-04-02 Permissible Open Burning

33.1-15-04-01. Refuse burning restrictions.

No person may cause, conduct, or permit open burning of refuse, trade waste, or other combustible material, except as provided for in section 33.1-15-04-02 or 33.1-15-10-02, and no person may conduct, cause, or permit the conduct of a salvage operation by open burning.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-04-02. Permissible open burning.

The open burning of refuse or other combustible material may be conducted as specified in this section if the burning is not prohibited by, and is conducted in compliance with, other applicable laws, ordinances, and regulations. Burning is prohibited if the fire index is in the extreme category as issued by the national weather service or if a burning ban is declared by state or local officials. The authority to conduct open burning under this section does not exempt or excuse a person from the consequences, damages, or injuries that may result therefrom.

1. The following types of burning are specifically authorized but are subject to the conditions listed in subsection 2 as well as any condition included as part of this subsection:

a. Fires purposely set for the instruction and training of public and industrial firefighting personnel.

b. Fires set for the elimination of a fire hazard that cannot be abated by any other means when authorized by the department or its designee.

c. Fires set for the removal of dangerous or hazardous material, where there is no other practical or lawful method of disposal and burning is approved in advance by the department. Where there is imminent danger to human health or safety and where there is no other practical or lawful method of disposal, burning may be initiated without prior notice to the department, provided notice is furnished as soon as practical.

d. Campfires and other fires used solely for recreational purposes, for ceremonial occasions, or for outdoor preparation of food.

e. Fires purposely set to forest or rangelands for a specific reason in the management of forest, rangeland, or game in accordance with practices recommended by state or federal agencies, as appropriate, and the burning is approved in advance by the department. The state or federal agency shall, upon request by the department, submit an annual report that estimates the number of acres burned, the fuel loading, and the amount of emissions.

f. The burning of trees, brush, grass, wood, and other vegetable matter in the clearing of land, right-of-way maintenance operations, and agricultural crop burning.

g. The burning of refuse and other combustible materials generated in the operation of a domestic household if the following conditions are met:

(1) No collection and disposal service is required or directed by a municipality or other government entity.

(2) The material to be burned is from a building accommodating no more than one family.

(3) The burning is conducted on the property on which the waste is generated.

- h. The burning of liquid hydrocarbons that are spilled or lost as a result of pipeline breaks or other accidents involving the transportation of such materials or which are generated as wastes as the result of oil exploration, development, production, refining, or processing operations if the following conditions are met:
- (1) The material cannot be practicably recovered or otherwise lawfully disposed of in some other manner.
- (2) The burning must be approved in advance by the department, except as provided in subdivision c.
2. The following conditions apply to all types of permissible burning listed in subsection 1.
- a. Air pollution, as defined in section 33.1-15-01-04, will not be created.
- b. The burning must not be conducted upwind of, or in proximity to, an occupied building such that the ambient air of such occupied building may be adversely affected by the air contaminants being emitted.
- c. Care must be used to minimize the amount of dirt on the material being burned and the material must be dry enough to burn cleanly.
- d. Oils, rubber, and other materials that produce unreasonable amounts of air contaminants may not be burned.
- e. The burning may be conducted only when meteorological conditions favor smoke dispersion and air mixing.
- f. The burning must not be conducted adjacent to any highway or public road so as to create a traffic hazard.
- g. The burning must not be conducted adjacent to any operational military, commercial, county, municipal, or private airport or landing strip in such a manner as to create a hazard.
- h. Except in an emergency, burning may not be conducted in such proximity of any class I area, as defined in chapter 33.1-15-15, that the ambient air of such area is adversely impacted.
- i. Except in an emergency, the visibility of any class I area cannot be adversely impacted as defined in chapter 33.1-15-19.
- j. Burning activities must be attended and supervised at all times burning is in progress.
- k. If state or local fire officials determine conditions to be unsafe for open burning, such burning must cease until conditions are deemed safe by such officials.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-05
EMISSIONS OF PARTICULATE MATTER RESTRICTED

Section

- 33.1-15-05-01 Restriction of Emission of Particulate Matter From Industrial Processes
33.1-15-05-02 Maximum Allowable Emission of Particulate Matter From Fuel Burning
Equipment Used for Indirect Heating
33.1-15-05-03 Refuse Incinerators
33.1-15-05-03.1 Other Waste Incinerators
33.1-15-05-04 Methods of Measurement

33.1-15-05-01. Restriction of emission of particulate matter from industrial processes.

1. General provisions.

- a. This section applies to any operation, process, or activity from which particulate matter is emitted except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials, the burning of refuse, and the processing of salvable material by burning.
- b. The process weight rate per hour referred to in this section shall be based upon the normal operation maximum capacity of the equipment, and if such normal maximum capacity should be increased by process or equipment changes, the new normal maximum capacity shall be used as the process weight in determining the allowable emissions.

2. Emission limitations. No person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in table 3 for the process weight allocated to such source.

a. Exceptions.

(1) [Reserved]

(2) The department may prescribe air quality control requirements that are more restrictive and more extensive than provided in subsection 2 if the particulate matter emitted is a radioactive, toxic, or deleterious substance which may affect human health or well-being or that would cause significant damage to animal or plant life.

(3) Any existing emission source which has particulate collection equipment with a collection efficiency of ninety-nine and seven-tenths percent or more by weight shall be considered as meeting the provisions of subsection 2. The efficiency of the particulate collection equipment shall be determined as outlined in section 33.1-15-05-04 with the process being served by the particulate collection equipment being run at normal operation maximum capacity.

(4) Any portable emission source, not operated at the same premise for more than six months, shall be considered as meeting the provisions of subsection 2 if the source stack or stacks are equipped with particulate

collection efficiency of eighty-five percent or more by weight as determined in paragraph 3, and all of the following conditions are met:

- (a) The source must not be located within a city.
- (b) The source must not be located within one-half mile [.80 kilometers] of any occupied residence, and within one mile [1.61 kilometers] of the source there shall be no more than two occupied residences.
- (c) The source must not be located within one-quarter mile [.40 kilometers] of any highway or public road.

b. Grievance procedure. If any party is aggrieved by the department's decision as referenced in paragraph 2 of subdivision a, that party may request a hearing before the department to review such decision. Such hearing must be conducted according to North Dakota Century Code chapter 28-32. If a hearing is requested, the requirements of paragraph 2 of subdivision a are not effective until ordered by the department at the conclusion of the hearing process.

Table 3. Maximum Allowable Rates of Emission of Particulate Matter from Industrial Processes

<u>English</u>		<u>Metric</u>	
<u>Process Weight Rate (p)</u>	<u>Allowable Emission Rate (E)</u>	<u>Process Weight Rate (p)</u>	<u>Allowable Emission Rate (E)</u>
<u>tons/hr</u>	<u>lb/hr</u>	<u>metric tons/hr</u>	<u>kg/hr</u>
<u>0.05</u>	<u>0.551</u>	<u>0.045</u>	<u>0.25</u>
<u>0.25</u>	<u>1.62</u>	<u>0.23</u>	<u>0.74</u>
<u>0.50</u>	<u>2.58</u>	<u>0.45</u>	<u>1.16</u>
<u>2.50</u>	<u>7.58</u>	<u>2.27</u>	<u>3.43</u>
<u>5.00</u>	<u>12.05</u>	<u>4.54</u>	<u>5.46</u>
<u>10.00</u>	<u>19.18</u>	<u>9.07</u>	<u>8.67</u>
<u>25.00</u>	<u>35.43</u>	<u>22.68</u>	<u>16.03</u>
<u>50.00</u>	<u>44.58</u>	<u>45.36</u>	<u>20.21</u>
<u>250.00</u>	<u>60.96</u>	<u>226.80</u>	<u>27.65</u>
<u>500.00</u>	<u>68.96</u>	<u>453.59</u>	<u>31.29</u>
<u>1000.00</u>	<u>77.59</u>	<u>907.19</u>	<u>35.21</u>
<u>2500.00</u>	<u>90.06</u>	<u>2267.96</u>	<u>40.87</u>

Interpolation of the data in this table for process weight rates up to 30 tons/hr [27.21 metric tons/hr] shall be accomplished by the use of the equations:

$$E = 4.10 p^{0.67} \text{ (English units)}$$

$$E = 1.98 p^{0.67} \text{ (Metric units)}$$

and interpolation and extrapolation of the data for process weight rates in excess of 30 tons/hr [27.21 metric tons/hr] shall be accomplished by the use of the equations:

$$E = 55.0 p^{0.11} - 40 \text{ (English units)}$$

$$E = 25.25 p^{0.11} - 18.2 \text{ (Metric units)}$$

where E = allowable emission rate in lb/hr [kg/hr] and p = process weight rate in tons/hr [metric tons/hr].

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-13; S.L. 2017, ch. 199, § 21

33.1-15-05-02. Maximum allowable emission of particulate matter from fuel burning equipment used for indirect heating.

1. General provisions.

- a. This section applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, hot air, or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, fuel oil, and wood but do not include refuse. When any products or byproducts of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.
- b. The maximum allowable particulate matter which may be emitted from fuel burning units at a source is determined by the maximum or manufacturer's rated heat input of each unit.
- c. Fuel burning equipment that meets the applicability requirements of subdivision a in which a gaseous fuel is burned alone or in combination with other gaseous fuels is exempt from the emission limitations in subsection 2. Fuel burning equipment that burns a gaseous fuel, or fuels, in combination with other fuels is subject to the emission limitations in subsection 2.

2. Emission limitations.

- a. Existing installations. No person shall cause or permit the emission of particulate matter, caused by combustion of fuel in any existing fuel burning equipment, from any stack or chimney in excess of eighty-hundredths pounds of particulates per million British thermal units [344 nanograms per joule] heat input. Provided, however, as technology develops for making new control equipment compatible, both technically and economically, with present plants they shall comply with limitations on emissions of particulate matter from fuel burning installations as outlined in subdivision b when directed by the department.
- b. New installations. No person shall cause or permit the emission of particulate matter, caused by the combustion of fuel in any new fuel burning equipment, from any stack or chimney in excess of the quantity set forth in table 4.

- c. Means shall be provided in all newly constructed units and wherever practicable in existing units to allow the periodic measurement of fly ash and other particulate matter.
- d. No person may burn or cause or permit the burning of refuse, including preservative treated wood, in any installation which was designed for the sole purpose of burning fuel unless approved by the department.
- e. Existing or new installations, with a heat input of not more than ten million British thermal units per hour and sources with multiple boilers with a total aggregate heat input of not more than ten million British thermal units per hour, shall be exempt from the applicable allowable emission rate set forth in subdivision a or in table 4, respectively. These sources shall be subject to visible emission and ambient air quality standards.
- f. Any new or existing source whose heat input is greater than two hundred fifty million British thermal units per hour and is equipped with state-of-the-art control technology capable of complying with the particulate emission limitations of subparagraph 1 of paragraph a of section 60.42 of subpart D of chapter 33.1-15-12 [40 CFR 60.42(a)(1)] shall comply with such limitations when directed by the department.
- g. If any party is aggrieved by the department's decision as referenced in subdivision a or f, that party may request a hearing before the department to review such decision. Such hearing must be conducted according to North Dakota Century Code chapter 28-32. If a hearing is requested, the emission limitations as referenced in subdivision a or f (whichever is applicable) are not effective until ordered by the department at the conclusion of the hearing process.

Table 4. Maximum Allowable Rates of Emission of Particulate Matter from New Fuel Burning Equipment

<u>Heat Input (H)</u>	<u>Allowable Emission Rate (E)</u>	<u>Heat Input (H)</u>	<u>Allowable Emission Rate (E)</u>
<u>10⁶ Btu/hr</u>	<u>lb/10⁶ Btu</u>	<u>joules/hr</u>	<u>nanogram/joule</u>
<u>10 or less</u>	<u>0.600</u>	<u>1.05 x 10¹⁰</u>	<u>258</u>
<u>20</u>	<u>0.548</u>	<u>2.11 x 10¹⁰</u>	<u>235</u>
<u>30</u>	<u>0.519</u>	<u>3.16 x 10¹⁰</u>	<u>224</u>
<u>40</u>	<u>0.500</u>	<u>4.22 x 10¹⁰</u>	<u>215</u>
<u>50</u>	<u>0.486</u>	<u>5.27 x 10¹⁰</u>	<u>209</u>
<u>100</u>	<u>0.444</u>	<u>1.05 x 10¹¹</u>	<u>191</u>
<u>150</u>	<u>0.421</u>	<u>1.58 x 10¹¹</u>	<u>181</u>
<u>200</u>	<u>0.405</u>	<u>2.11 x 10¹¹</u>	<u>174</u>

Interpolation and extrapolation of the data in this table shall be accomplished by the use of equations:

$$E = 0.811 H^{-0.131} \text{ (English units)}$$

$$E = 5307 H^{-0.131} \text{ (Metric units)}$$

where E = allowable emission rate in lb/million Btu of heat input [nanogram/joule] and H = heat input in millions of Btu/hr [joules/hr].

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-13; S.L. 2017, ch. 199, § 21

33.1-15-05-03. Refuse incinerators.

1. Applicability.

- a. The owner or operator of an incinerator of any design capacity for refuse, except trash and refuse derived fuel, must comply with 40 CFR part 60, subpart Ea, which is incorporated by reference in chapter 33.1-15-12.
- b. Beginning August 1, 1996, no owner or operator of an incinerator for refuse may incinerate materials of any type or form which are recyclable, unless the owner demonstrates to the department that recycling for a waste material is not reasonably available. Documents subject to state or federal privacy regulations may be incinerated when no other acceptable method of disposal is reasonably available.
- c. Beginning August 1, 1997, each existing incinerator for trash must meet the same standards as a new incinerator for trash.
- d. As used in this section, "new incinerator" means an incinerator, the construction for which has not been approved by the department prior to August 1, 1995.

2. Existing trash incinerators. This subsection applies to any owner or operator of an incinerator for trash of any design capacity existing on August 1, 1995.

- a. Prohibited waste. No infectious waste, radioactive waste, hazardous waste, special waste, industrial waste, or any other solid waste may be burned in an incinerator designed for trash unless the incinerator's performance, design, and operating standards for those solid wastes are also met.
- b. Operator training. The owner or operator of an incinerator for trash shall provide both written and oral instructions for each operator in the proper operation of the incinerator.
- c. Recordkeeping and reporting.
 - (1) The owner or operator of an incinerator for trash shall keep a log indicating the dates and approximate quantities of waste received from an onsite source, and from each offsite source, including the transporter. The log shall

be kept and maintained for a minimum period of three years from the date waste is received.

(2) An owner or operator of an incinerator for trash shall record in the log any operational error or failure of one-hour or more duration of combustion equipment, emission control equipment, waste charging equipment, or monitoring equipment.

(3) When requested by the department, the owner or operator of an incinerator for trash shall provide a summary of the daily burning and hours of operation.

3. **New trash incinerators.** In addition to subsection 2, this subsection applies to an owner or operator of a new incinerator for trash.

a. Design. Each new incinerator for trash must be equipped with a primary combustion chamber or zone which provides complete combustion of solid waste and a secondary combustion chamber or zone which provides turbulent mixing. Auxiliary fuel burners are required in all chambers. The department may approve an alternate design provided the design achieves the performance requirements of this section.

b. Opacity. No owner or operator of a new incinerator for trash may allow to be discharged into the atmosphere any air contaminant which exhibits an opacity greater than ten percent except that a maximum of twenty percent opacity is permissible for not more than one 6-minute period per hour.

c. Operating temperature. Each new incinerator for trash shall maintain the flue gas temperature in the secondary combustion chamber or zone at one thousand five hundred degrees Fahrenheit [815 degrees Celsius] or greater for a minimum of one-half-second retention time.

d. Monitoring. Each new incinerator for trash shall be equipped with a continuous temperature monitor, with readout, to monitor the temperature of the gases exiting the secondary combustion chamber or zone.

e. Stack height. Each new incinerator for trash shall be equipped with a stack for the discharge of flue gases of sufficient height to prevent ambient concentrations of air contaminants greater than allowed by chapter 33.1-15-02. The minimum stack height is forty feet [12.2 meters] unless it is demonstrated that a stack height less than forty feet [12.2 meters] will meet the standards of chapter 33.1-15-02. The department may require taller stacks when it is necessary to meet the standards of chapter 33.1-15-02.

f. Waste charging.

(1) The waste charging system for a new incinerator for trash must be designed to prevent disruption of the combustion process as waste is charged.

(2) The waste charging system must be designed to prevent overcharging to assure complete combustion. No owner or operator may cause an incinerator for trash to operate at a load greater than one hundred percent of design capacity.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-05-03.1. Other waste incinerators.

1. **Salvage incinerators.** The department may require construction, operational, and recordkeeping standards and procedures for salvage incinerators. No industrial waste, radioactive waste, hazardous waste, or infectious waste may be burned in a salvage incinerator, unless specifically approved by the department.

2. **Air curtain destructors.** The department may require construction, operational, and recordkeeping standards and procedures for air curtain destructors based upon factors such as characteristics and quantities of materials to be destroyed by burning and site location.

3. **Industrial waste and special waste incinerators.** The department may require construction, operational, emission, monitoring, recordkeeping, and reporting standards and procedures for incinerators of industrial waste based upon factors such as characteristics and quantities of the industrial waste and site location.

4. Crematoriums.

a. No owner or operator of combustion units operated as a human or animal crematorium or in an animal farm operation for animal disposal may burn any other type or form of materials or solid waste unless specifically approved by the department.

b. No owner or operator of a crematorium may allow to be discharged into the atmosphere any air contaminant, which exhibits an opacity greater than ten percent except that a maximum of twenty percent is permissible for not more than one 6-minute period per hour.

c. A crematorium constructed and operated after August 1, 1995, must be equipped with two or more chambers and with auxiliary fuel burners, designed to assure a temperature in a secondary chamber of at least one thousand six hundred degrees Fahrenheit [871 degrees Celsius] for a minimum of one-second retention time.

d. Monitoring. Each new crematorium must be equipped with a continuous temperature monitor, with readout, to monitor the temperature of the gases exiting the secondary combustion chamber or zone. Each human crematorium installed or reinstalled after September 1, 2002, must be equipped with a temperature recorder.

e. Charging. A crematorium must be charged in accordance with the manufacturer's procedures or recommendations. Deviations from these procedures or recommendations are allowed provided credible evidence has been submitted to the department that indicates the deviations will reduce air contaminant emissions. Such evidence shall be provided prior to implementation of the deviations.

- f. Operation. Operators of human crematoriums shall be trained in the proper operation of the unit. A copy of the operation and maintenance manual for the unit shall be available onsite. A trained crematorium operator must be onsite at a human crematorium while the cremation process is taking place.
- g. General. The department may establish additional construction, operational, emission, monitoring, recordkeeping, and reporting standards and procedures for crematoriums based upon factors such as quantities of material charged, emissions, and site location.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-05-04. Methods of measurement.

- 1. The reference methods in appendix A to chapter 33.1-15-12, its replacement or other methods, as approved by the department shall be used to determine compliance with sections 33.1-15-05-01 and 33.1-15-05-02 as follows:
 - a. Method 1 for selection of sampling site and sample traverses.
 - b. Method 2 for determination of stack gas velocity and volumetric flow rate.
 - c. Method 3 for gas analysis.
 - d. Method 4 for determination of moisture in the stack gas.
 - e. Method 5 for concentration of particulate matter and the associated moisture content. The sampling time for each run shall be at least sixty minutes and the minimum sampling volume shall be thirty dry cubic feet at standard conditions [0.85 dry cubic meter at standard conditions] except that smaller sampling times or volumes when necessitated by process variables or other factors may be approved by the department.
 - (1) For each run using method 5 for fuel burning equipment, the emissions expressed in pounds per million British thermal units [nanograms per joule] shall be determined by the following procedures:

$$\frac{E = CF_d (\frac{20.9}{20.9 - \% O_2})}{\quad} \quad \text{or} \quad \frac{E = CF_c (\frac{100}{\% CO_2})}{\quad}$$

where:

- (a) E = pollutant emission, lb/million Btu [ng/i].
- (b) C = pollutant concentration, lb/dscf [ng/dscm].
- (c) %O₂ = oxygen content by volume, dry basis.
- (d) %CO₂ = carbon dioxide content by volume, dry basis.

The percent oxygen and percent carbon dioxide shall be determined by using the integrated or grab sampling and analysis procedures of

method 3, 3A, 3B, or 3C, as appropriate, by traversing the duct at the same sampling locations used for each run of method 5.

(e) F_d and F_c = factors as listed in method 19 appendix A of chapter 33.1-15-12.

(2) For each run using method 5 for industrial processes, the emission rate expressed in pounds per hour shall be determined by the equation $lb/hr = (Q_s) (c)$ where:

Q_s = volumetric flow rate of the total effluent in dscf/hr and

c = particulate concentration in lb/dscf.

2. The heat content of fuels shall be determined in accordance with A.S.T.M. methods D2015-66(72) (solid fuels), D240-64(73) (liquid fuels), or D1826-64(70) (gaseous fuels), as applicable.

3. The determination of particulate matter emissions with an aerodynamic diameter less than or equal to ten micrometers [PM_{10}] and particulate matter emissions with an aerodynamic diameter less than or equal to two and one-half micrometers [$PM_{2.5}$] must be made in accordance with the methods established in 40 Code of Federal Regulations, part 51, appendix M, as applicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-06 **EMISSIONS OF SULFUR COMPOUNDS RESTRICTED**

Section

33.1-15-06-01 Restriction of Emissions of Sulfur Dioxide From Use of Fuel

33.1-15-06-02 Restriction of Emissions of Sulfur Oxides From Industrial Processes

33.1-15-06-03 Methods of Measurement

33.1-15-06-04 Continuous Emission Monitoring Requirements

33.1-15-06-05 Reporting and Recordkeeping Requirements

33.1-15-06-01. Restriction of emissions of sulfur dioxide from use of fuel.

1. General provisions.

a. Except as provided in subdivision c, this section applies to any installation in which fuel is burned and in which the sulfur dioxide emissions are substantially due to the content of the fuel burned, and in which the fuel is burned primarily to produce heat.

b. For purposes of this section, a fuel burning installation is any single fuel burning furnace or boiler or other unit, device, or contrivance in which fuel is burned or any grouping of two or more such furnaces or boilers or other units, devices, or contrivances on the same premises or otherwise located in close proximity to each other and under control of the same person. The capacity of such

installations shall be the manufacturer's or designer's guaranteed maximum heat input rate.

c. This chapter does not apply to installations which are subject to a sulfur dioxide emission limit under chapter 33.1-15-12.

d. For purposes of this chapter, equipment at an oil and gas production facility, as defined in chapter 33.1-15-20, is considered industrial process equipment.

e. This chapter does not apply to installations that burn pipeline quality natural gas or A.S.T.M. commercial propane alone or in combination with each other. Installations that burn pipeline quality natural gas or A.S.T.M. commercial propane in combination with other fuels are subject to the requirements of this chapter.

2. **Restrictions applicable to fuel burning installations.** No person shall cause or permit the emission of sulfur dioxide to the ambient air from any fuel burning installation in an amount greater than three and zero-tenths pounds of sulfur dioxide per million British thermal units [1290 nanograms/joule] of heat input to the installation on a one-hour-block-average basis. The department may establish alternative averaging periods provided the requirements of chapter 33.1-15-02 are met. All averaging periods must begin on the hour and averaging periods greater than one hour must be rolling averages.

3. The department shall establish more restrictive emission limits for a source if it is determined that such source is causing the ambient air quality standards of chapter 33.1-15-02 or the prevention of significant deterioration increments of chapter 33.1-15-15 for sulfur dioxide to be exceeded. However, the department may consider alternative measures which will achieve compliance with the ambient air quality standards or prevention of significant deterioration increments.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-02. Restriction of emissions of sulfur oxides from industrial processes.

1. **General provisions.** This section applies to all emissions except those in which all of the following are met:

a. Fuel is burned primarily to produce heat.

b. The sulfur compound emission is due primarily to the sulfur in the fuel burned.

2. **Concentration of sulfur compounds in emissions restricted.** The department shall establish emission limitations on the amount of sulfur dioxide, sulfur trioxide, and sulfuric acid which may be emitted into the ambient air from any source specified in subsection 1 in any area, if it is determined that such source is causing the ambient air quality standards of chapter 33.1-15-02 or the prevention of significant deterioration increments of chapter 33.1-15-15 for sulfur dioxide to be exceeded.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-03. Methods of measurement.

Testing must be done in accordance with the provisions of chapter 33.1-15-12, as applicable. The reference methods in appendix A to chapter 33.1-15-12, its replacement or applicable alternative methods as approved by the department, shall be used to determine compliance with this chapter as follows:

1. Method 1 for selection of sampling site and sample traverses.
2. Method 2 for stack gas velocity and volumetric flow rate.
3. Method 3 for gas analysis.
4. Method 4 for moisture content.
5. Method 6, 6A, 6C, and 20, as applicable, for concentration of sulfur dioxide. The minimum sampling time shall be at least sixty minutes per run and a test must consist of three runs.

For each run using method 6 for fuel burning equipment the emissions expressed in pounds per million British thermal units [nanogram per joule] shall be determined by the following procedures:

$$\underline{E = CF_d(20.9)} \quad \text{or} \quad \underline{E = CF_c (100)}$$
$$\underline{20.9 - \%O_2} \qquad \qquad \underline{\%CO_2}$$

where:

- (1) E = pollutant emission, lb/million Btu [ng/j].
- (2) C = pollutant concentrations, lb/dscf [ng/dscm].
- (3) %O₂ = oxygen content by volume, dry basis.
- (4) %CO₂ = carbon dioxide content by volume, dry basis.

The percent oxygen and percent carbon dioxide shall be determined by using the integrated sampling and analysis procedures of method 3.

- (5) F_d and F_c = factors listed in method 19 of appendix A of chapter 33.1-15-12.

For facilities firing combinations of fuels the F_d or F_c factors designated in this section shall be prorated in accordance with the applicable formula as follows:

$$\underline{F_d = \sum_{i=1}^n x_i (F_d)_i} \quad \text{or} \quad \underline{F_c = \sum_{i=1}^n x_i (F_c)_i}$$

where:

x_i = the fraction of total heat input derived from each type of fuel.

(F_d)_i or (F_c)_i = the applicable F_d or F_c factor for each fuel type.

n = the number of fuels being burned in combination.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-06-04. Continuous emission monitoring requirements.

1. General provisions.

- a. For sources subject to continuous emission monitoring requirements in their permit to operate, the monitoring systems must be used to demonstrate compliance with emission limits on a continuous basis after the initial compliance test and certification of the system.
- b. Emission rates must be recorded in the units of the applicable standard. Conversion of monitor data to an emission rate expressed in pounds per million British thermal units [nanogram per joule] shall be calculated in accordance with the equations in section 33.1-15-06-03. Equations for calculating emission rates with different units will be supplied by the department.

2. Installation, operation, and certification. The installation operation, and certification of continuous monitoring systems and monitoring devices must comply with the provisions of chapter 33.1-15-12 that apply to monitoring systems and monitoring devices.

3. Quality assurance. All continuous monitoring systems and monitoring devices must be recertified in accordance with the provisions of appendix B of chapter 33.1-15-12 every three years unless otherwise directed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-06-05. Reporting and recordkeeping requirements.

1. Excess emissions reports. Not later than thirty days following the end of a calendar quarter, any owner or operator required to monitor emissions in accordance with section 33.1-15-06-04 shall submit a report of excess emissions to the department. The report must include the following information:

- a. The magnitude of excess emissions, any conversion factor or factors used, and the date and time of commencement and completion of each time period of excess emissions.
- b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired, or adjusted, such information must be stated in the report.

2. **Records.** Any owner or operator subject to continuous emission monitoring requirements shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by the department recorded in a permanent form suitable for inspection. The file must be retained for at least two years following the date of such measurements, maintenance, reports, and records.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-07 **CONTROL OF ORGANIC COMPOUNDS EMISSIONS**

Section

33.1-15-07-01 Requirements for Construction of Organic Compounds Facilities

33.1-15-07-02 Requirements for Organic Compounds Gas Disposal

33.1-15-07-01. Requirements for construction of organic compounds facilities.

1. **Scope.** This section applies only to those facilities considered "new" as defined in section 33.1-15-01-04.
2. **Water separation from petroleum products.** No person may build or install any single or multiple compartment volatile organic compounds - water separator which normally receives effluent water containing two hundred gallons [757.08 liters] per day or more of any volatile organic liquid from any equipment processing, refining, treating, storing, or handling volatile organic compounds unless such compartment is equipped with a closed-vent system and control device as defined in 40 CFR, part 60, subpart QQQ, section 60.691, as adopted in chapter 33.1-15-12, or a floating roof as described in 40 CFR, part 60, subpart QQQ, section 60.693-2, as adopted in chapter 33.1-15-12, which is properly installed and in good working order. For the purposes of this section, a volatile organic compounds - water separator means a device used to separate an oil water mixture into its separate components, which include volatile organic compounds and water, by gravity separation and skimming.
3. **Submerged fill pipes required.** No person may build or install or permit the building or installation of a stationary volatile organic compounds storage tank with a capacity of one thousand gallons [3,785.41 liters] or more unless such tank is equipped with a submerged fill pipe during filling operations or is a pressure tank as described in 40 CFR, part 60, subpart K, subparagraph 60.111(a)(1), as adopted in chapter 33.1-15-12, or fitted with a vapor recovery system also defined in 40 CFR, part 60, subpart K, paragraph 60.111(k), as adopted in chapter 33.1-15-12.

4. **Volatile organic compounds loading facilities.** No person may build or install or permit the building or installation of volatile organic compounds tank car or tank truck loading facilities handling twenty thousand gallons [75,708.24 liters] per day or more unless such facilities are operated with a submerged filling arm or other vapor emission control system. Any emissions control system utilized must have a minimum control efficiency necessary to meet the requirements of chapters 33.1-15-02 and 33.1-15-16.
5. **Pumps and compressors.** All rotating pumps and compressors handling volatile organic compounds must be equipped and operated with properly maintained seals designed for their specific product service and operating conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-07-02. Requirements for organic compounds gas disposal.

1. No person may cause or permit the emission of organic compounds gases and vapors, except from an emergency vapor blowdown system or emergency relief system, unless these gases and vapors are burned by flares, or an equally effective control device as approved by the department. Minor sources, as determined by the department and not subject to New Source Performance Standards (NSPS), may be granted exemptions to this subsection.
2. Organic compounds gases and vapors which are generated as wastes as the result of storage, refining, or processing operations and which contain hydrogen sulfide, shall be incinerated, flared, or treated in an equally effective manner before being released to the ambient air. The emissions from all devices designed for incinerating, flaring, or treating waste organic compounds gases and vapors shall result in compliance with chapters 33.1-15-02 and 33.1-15-16.
3. Each flare required under this section must be equipped and operated with an automatic igniter or a continuous burning pilot.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-08 **CONTROL OF AIR POLLUTION FROM VEHICLES AND OTHER INTERNAL** **COMBUSTION ENGINES**

Section

33.1-15-08-01 Internal Combustion Engine Emissions Restricted

33.1-15-08-02 Removal or Disabling of Motor Vehicle Pollution Control Devices Prohibited

33.1-15-08-01. Internal combustion engine emissions restricted.

No person shall operate, or cause to be operated, any internal combustion engine which emits from any source any unreasonable and excessive smoke, obnoxious or noxious gases, fumes or vapor.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-08-02. Removal or disabling of motor vehicle pollution control devices prohibited.

1. No person shall intentionally remove, alter, or otherwise render inoperative, exhaust emission control, crankcase ventilation, or any other air pollution control device which has been installed as a requirement of federal law or regulation.
2. No person shall operate a motor vehicle originally equipped with air pollution control devices as required by federal law or regulation unless such devices are in place and in operating condition.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-09

[RESERVED]

CHAPTER 33.1-15-10

CONTROL OF PESTICIDES

Section

33.1-15-10-01 Pesticide Use Restricted

33.1-15-10-02 Restrictions on the Disposal of Surplus Pesticides and Empty Pesticide Containers

33.1-15-10-01. Pesticide use restricted.

1. No person shall use or permit the use of pesticides in such manner that will cause the airborne drift of pesticides off the premises on which they are being applied in such quantities that cause damage or injury to human health, crops, domestic animals, pollinating insects, vegetation, fish, and wildlife.
2. No person shall aerial spray or permit the aerial spraying of pesticides over a city in the state without the approval of the department. Such spraying will be allowed only for well-thought-out public health purposes and even then only in emergencies or potential emergencies.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-10-02. Restrictions on the disposal of surplus pesticides and empty pesticide containers.

1. No person shall dispose of or permit the disposal of surplus pesticides and empty pesticide containers in such a manner as may cause pesticides to become airborne in such quantities that may cause injury or damage to human health, crops, domestic animals, pollinating insects, vegetation, fish, and wildlife.

2. No person shall dispose of or permit the disposal of surplus pesticides by open burning.
3. Burning of empty pesticide containers is not allowed except where no municipal collection and disposal service is available and all of the following conditions are met:
 - a. Only plastics composed of carbon, hydrogen, or oxygen may be burned. Plastics composed of polymers of nitrogen, halogens including chlorine, or sulfur may not be burned.
 - b. The containers must be empty and triple rinsed before being burned. Containers such as bags or liners must be thoroughly emptied of pesticides prior to burning.
 - c. The open burning must be conducted on the farm by the farmers who generated the empty containers.
 - d. The open burning shall be conducted in an open area away from buildings and residences, and only when the wind direction disperses the smoke away from any human or animal.
 - e. Burning may not be conducted by commercial applicators or to dispose of large stockpiles of empty containers.

The authority to conduct such open burning does not exempt or excuse a person from the consequences, damages, or injuries which may result therefrom.

4. The disposal of surplus pesticides and empty pesticide containers must be in accordance with rules promulgated pursuant to authorities of the Solid Waste Management and Land Protection Act and the Hazardous Waste Management Act of the North Dakota Century Code.
5. The handling and disposal of pesticide containers, including burning, must comply with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended October 25, 1988.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-11 **PREVENTION OF AIR POLLUTION EMERGENCY EPISODES**

Section

33.1-15-11-01 Air Pollution Emergency

33.1-15-11-02 Air Pollution Episode Criteria

33.1-15-11-03 Abatement Strategies Emission Reduction Plans

33.1-15-11-04 Preplanned Abatement Strategies Plans

33.1-15-11-01. Air pollution emergency.

This chapter is designed to prevent the excessive buildup of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these air contaminants on human health.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-11-02. Air pollution episode criteria.

Conditions justifying the proclamation of an air pollution alert, air pollution warning, or air pollution emergency shall be deemed to exist whenever the department determines that the accumulation of air contaminants in any place within North Dakota is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to human health. In making this determination, the department will be guided by the criteria listed in table 6.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-11-03. Abatement strategies emission reduction plans.

1. When the department declares an air pollution alert, air pollution warning, or air pollution emergency, any person responsible for the operation of a source of air contaminants as set forth in table 7 shall take all actions as required by table 7 for such source of air contaminants for the level declared and shall put into effect the preplanned abatement strategies plan for the level declared. The department shall notify the public by means of a public announcement whenever an air pollution alert, air pollution warning, or air pollution emergency has been determined to exist.
2. When the department determines that a specified criteria level has been reached at one or more monitoring sites solely because of emissions from a limited number of sources, the department shall notify such source or sources that the actions set forth in table 7 or the preplanned abatement strategies plans are required, insofar as it applies to such source or sources and shall be put into effect until the criteria of the specified level are no longer met.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-11-04. Preplanned abatement strategies plans.

1. Any person responsible for the operation of a source of air contaminants as set forth in table 7 shall prepare abatement strategies plans for reducing the emission of air contaminants during periods of an air pollution alert, air pollution warning, and air pollution emergency. Abatement strategies plans shall be designed to reduce or eliminate emissions of air contaminants in accordance with the objectives set forth in table 7.
2. Any person responsible for the operation of a source of air contaminants not set forth under subsection 1 shall, when requested by the department, in writing, prepare abatement strategies plans for reducing the emission of air contaminants during periods of an air pollution alert, air pollution warning, and air pollution emergency. Abatement strategies plans shall be designed to reduce or eliminate emissions of air contaminants in accordance with the objectives set forth in table 7.

3. Abatement strategies plans as required under subsections 1 and 2 shall be in writing and identify the sources of air contaminants, the approximate amount of reduction of air contaminants, and a brief description of the manner in which the reduction will be achieved during an air pollution alert, air pollution warning, and air pollution emergency.
4. During a condition of air pollution alert, air pollution warning, and air pollution emergency, abatement strategies plans as required by subsections 1 and 2 shall be made available on the premises to any person authorized to enforce the provisions of applicable rules and regulations.
5. Abatement strategies plans as required by subsections 1 and 2 shall be submitted to the department upon request within thirty days of the receipt of such request; such abatement strategies plans shall be subject to review and approval by the department. If, in the opinion of the department an abatement strategies plan does not effectively carry out the objectives as set forth in table 7, the department may disapprove it, state the reasons for disapproval, and order the preparation of an amended abatement strategies plan within the time period specified in the order.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

Table 6.

Air Pollution Episode Criteria

1. Air pollution forecast:

An internal watch by the department shall be actuated by a national weather service advisory that an atmospheric stagnation advisory is in effect or the equivalent local forecast of a stagnant atmospheric condition.

2. Air pollution alert:

The alert level is that concentration of contaminants at which first stage control actions are to begin. An alert will be declared when any one of the following levels is reached at any monitoring site:

SO₂-800 µg/m (0.3 ppm), 24-hour average.

PM₁₀ - 350 µg/m³, 24-hour average.

CO-17 mg/md 0 (15 ppm), 8-hour average.

Ozone (O₃) - 400 µg/m³ (0.2 ppm), 1-hour average.

NO₂ - 1,130 µg/m³ (0.6 ppm), 1-hour average; 282 µg/m³ (0.15 ppm), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve or more hours or increase, or in the case of ozone, the situation is likely to recur within the next twenty-four hours unless control actions are taken.

3. Air pollution warning:

The warning level indicates that air quality is continuing to degrade and that additional control actions are necessary. A warning will be declared when any one of the following levels is reached at any monitoring site:

SO₂ - 1,600 µg/m³ (0.6 ppm), 24-hour average.

PM₁₀ - 420 µg/m³, 24-hour average.

CO-34 mg/m³ (30 ppm), 8-hour average.

Ozone (O₃) - 800 µg/m³ (0.4 ppm), 1-hour average.

NO₂ - 2,260 µg/m³ (1.2 ppm), 1-hour average; 565 µg/m³ (0.3 ppm), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve or more hours or increase,40 or in the case of ozone, the situation is likely to recur within the next twenty-four hours unless control actions are taken.

4. Air pollution emergency:

The emergency level indicates that air quality is continuing to degrade toward a level of significant harm to the health of persons and that the most stringent control actions are necessary. An emergency will be declared when any one of the following levels is reached at any monitoring site:

SO₂ - 2,100 µg/m³ (0.8 ppm), 24-hour average.

PM₁₀ - 500 µg/m³, 24-hour average.

CO-46 mg/m³ (40 ppm), 8-hour average.

Ozone (O₃) - 1,000 µg/m³ (0.5 ppm), 1-hour average.

NO₂ - 3,000 µg/m³ (1.6 ppm), 1-hour average; 750 µg/m³ (0.4 ppm), 24-hour average.

In addition to the levels listed for the above pollutants, meteorological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve or more hours or increase, or in the case of ozone, the situation is likely to recur within the next twenty-four hours unless control actions are taken.

5. Termination:

Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower status will be assumed.

Table 7.

Abatement Strategies Emission Reduction Plans
Air Pollution Alert Level
Part A. General

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste shall be limited to the hours between twelve noon and four p.m.
3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of twelve noon and four p.m.
4. Persons operating motor vehicles should eliminate all unnecessary operations.

Part B. Source Curtailment

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this alert level.

<u>Source of Air Contaminants</u>	<u>Control Action</u>
<u>1. Coal or oil-fired electric power generating facilities.</u>	<u>a. Substantial reduction by utilization of fuels having low ash and sulfur content.</u>
	<u>b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing and soot blowing.</u>
	<u>c. Substantial reduction by diverting electric power generation to facilities outside of alert area.</u>
<u>2. Coal and oil-fired process steam generating facilities.</u>	<u>a. Substantial reduction by utilization of fuels having low ash and sulfur content.</u>
	<u>b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler</u>

	lancing and soot blowing.
	c. Substantial reduction of steam load demands consistent with continuing plant operations.
3. Manufacturing industries of the following classifications:	a. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and all operations.
Primary metals industry.	
Petroleum refining operations.	
Chemical industries.	
Mineral processing industries.	b. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gas vapors and malodorous substances.
Grain industry.	
Paper and allied products.	
Other energy and fuel facilities.	
	c. Maximum reduction of heat load demands by processing.
	d. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing or soot blowing.

Air Pollution Warning Level
Part A. General

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid waste or liquid waste shall be prohibited.
3. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of twelve noon and four p.m.
4. Persons operating motor vehicles must reduce operations by the use of car pools and increased use of public transportation and elimination of unnecessary operation.

Part B. Source Curtailment

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this warning level.

<u>Source of Air Contaminants</u>	<u>Control Action</u>
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
	b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Maximum reduction by diverting electric power generation to facilities outside of warning area.
2. Coal and oil-fired process steam generating facilities.	a. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.
	b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Making ready for use a plan of action to be taken if an emergency develops.
3. Manufacturing industries which require considerable lead time for shutdown including the following classifications: Petroleum refining. Chemical industries. Primary metals industries. Glass industries.	a. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardships by postponing production and allied operation.

Paper and allied products. b. Maximum reduction by
Other energy and fuel deferring trade waste
facilities. disposal operations which
emit solid particles,
gases, vapors, or
malodorous substances.

c. Maximum reduction of
heat load demands for
processing.

d. Maximum utilization of
midday (twelve noon to
four p.m.) atmospheric
turbulence for boiler
lancing or soot blowing.

4. Manufacturing industries a. Elimination of air
which require relatively contaminants from
short lead times for shut- manufacturing operations
down including the by ceasing, curtailing,
following classifications: postponing, or deferring
Primary metals industries. production and allied
Chemical industries. operations to the extent
Grain industry. possible without causing
Mineral processing injury to persons or
industries. damage to equipment.

b. Elimination of air
contaminants from
industrial waste disposal
which emits solid particles,
gases, vapors, or malodorous
substances.

c. Maximum reduction of
heat load demands for
processing.

d. Maximum utilization of
midday (twelve noon to
four p.m.) atmospheric
turbulence for boiler
lancing or soot blowing.

Air Pollution Emergency Level
Part A. General

1. There shall be no open burning by any persons of tree waste, vegetation, refuse, or debris in any form.
2. The use of incinerators for the disposal of any form of solid or liquid waste shall be prohibited.
3. All places of employment described below shall immediately cease operations:
 - a. Mining and quarrying of nonmetallic minerals.
 - b. All construction work except that which must proceed to avoid emergent physical harm.
 - c. All manufacturing establishments except those required to have in force an air pollution emergency abatement strategies plan.
 - d. All wholesale trade establishments; i.e., places of business primarily engaged in selling merchandise to retailers, or industrial, commercial, institutional or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies, except those engaged in the distribution of drugs, surgical supplies and food.
 - e. All offices of local, county and state government including authorities, joint meetings, and other public bodies excepting such agencies which are determined by the chief administrative officer of local, county, or state government, authorities, joint meetings and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.
 - f. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.
 - g. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, real estate offices.
 - h. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, shoe repair shops.
 - i. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blueprinting; photocopying, mailing, mailing list and stenographic services; equipment rental services, commercial testing laboratories.
 - j. Automobile repair, automobile services, garages.
 - k. Establishments rendering amusement and recreational services including motion picture theaters.
 - l. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

4. All commercial and manufacturing establishments not included in this order will institute such actions as will result in maximum reduction of air contaminants from their operation by ceasing, curtailing, or postponing operations which emit air contaminants to the extent possible without causing injury to persons or damage to equipment.
5. The use of motor vehicles is prohibited except in emergencies with the approval of local police or state highway patrol.

Part B. Source Curtailment

Any person responsible for the operation of a source of air contaminants listed below shall take all required control actions for this emergency level.

<u>Source of Air Contaminants</u>	<u>Control Action</u>
1. Coal or oil-fired electric power generating facilities.	a. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
	b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing or soot blowing.
	c. Maximum reduction by diverting electric power generation to facilities outside of emergency area.
2. Coal and oil-fired process steam generating facilities.	a. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
	b. Maximum utilization of midday (twelve noon to four p.m.) atmospheric turbulence for boiler lancing and soot blowing.
	c. Taking the action called for in the abatement strategies plan for the emergency level.

<u>3. Manufacturing industries</u> <u>of the following</u> <u>classifications:</u> <u>Primary metals industries.</u> <u>Petroleum refining.</u> <u>Chemical industries.</u> <u>Mineral processing</u> <u>industries.</u> <u>Grain industry.</u> <u>Paper and allied products.</u> <u>Other energy and fuel</u> <u>facilities.</u>	<u>a. Elimination of air</u> <u>contaminants from</u> <u>manufacturing operations</u> <u>by ceasing, curtailing,</u> <u>postponing, or deferring</u> <u>production and allied</u> <u>operations to the extent</u> <u>possible without causing</u> <u>injury to persons or</u> <u>damage to equipment.</u>
	<u>b. Elimination of air</u> <u>contaminants from trade</u> <u>waste disposal processes</u> <u>which emit solid</u> <u>particles, gases, vapors,</u> <u>or malodorous substances.</u>
	<u>c. Maximum reduction of</u> <u>heat load demands for</u> <u>processing.</u>
	<u>d. Maximum utilization of</u> <u>midday (twelve noon to</u> <u>four p.m.) atmospheric</u> <u>turbulence for boiler</u> <u>lancing or soot blowing.⁸⁹.</u>

CHAPTER 33.1-15-12
STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Section

33.1-15-12-01 [Reserved]

33.1-15-12-01.1 Scope

33.1-15-12-02 Standards of Performance

33.1-15-12-01. [Reserved]

33.1-15-12-01.1. Scope.

Except as noted below the title of the subpart, the subparts and appendices of title 40, Code of Federal Regulations, part 60, as they exist on July 1, 2015, which are listed under section 33.1-15-12-02 are incorporated into this chapter by reference. Any changes to the standards of performance are listed below the title of the standard.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-12-01. [Reserved]

33.1-15-12-02. Standards of performance.

Subpart A - General provisions.

*60.2. The definition of administrator is deleted and replaced with the following:

Administrator means the department except for those duties that cannot be delegated by the United States environmental protection agency. For those duties that cannot be delegated, administrator means the administrator of the United States environmental protection agency.

Subpart C - Emission guidelines and compliance times.

Subpart Cc - Emissions guidelines and compliance times for municipal solid waste landfills.

Designated facilities to which this subpart applies shall comply with the requirements for state plan approval in 40 CFR parts 60.33c, 60.34c, and 60.35c, except that quarterly surface monitoring for methane under part 60.34c shall only be required during the second, third, and fourth quarters of the calendar year.

Designated facilities under this subpart shall:

1. Submit a final control plan for department review and approval within twelve months of the date of the United States environmental protection agency's approval of this rule, or within twelve months of becoming subject to this rule, whichever occurs later.
2. Award contracts for control systems/process modification within twenty-four months of the date of the United States environmental protection agency's approval of this rule, or within twenty-four months of becoming subject to the rule, whichever occurs later.
3. Initiate onsite construction or installation of the air pollution control device or process changes within twenty-seven months of the date of the United States environmental protection agency's approval of this rule, or within twenty-seven months of becoming subject to the rule, whichever occurs later.
4. Complete onsite construction or installation of the air pollution control device or devices or process changes within twenty-nine months of the United States environmental protection agency's approval of this rule, or within twenty-nine months of becoming subject to the rule, whichever is later.
5. Conduct the initial performance test within one hundred eighty days of the installation of the collection and control equipment. A notice of intent to conduct the performance test must be submitted to the department at least thirty days prior to the test.

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6. Be in final compliance within thirty months of the United States environmental protection agency's approval of this rule, or within thirty months of becoming subject to the rule, whichever is later.

Subpart Ce - Emission guidelines and compliance times for hospital/medical/infectious waste incinerators.

Except as noted below, designated facilities to which this rule applies shall comply with the minimum requirements for state plan approval listed in subpart Ce.

*60.39e(a) is deleted in its entirety.

*60.39e(b) is deleted in its entirety and replaced with the following:

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- (b) Except as provided in paragraphs c and d of this section, designated facilities shall comply with all requirements of this subpart within one year of the United States environmental protection agency's approval of the state plan for hospital/medical/infectious waste incinerators regardless of whether a designated facility is identified in the state plan. Owners or operators of designated facilities who will cease operation of their incinerator to comply with this rule shall notify the department of their intention within six months of state plan approval.

*60.39e(c) is deleted in its entirety and replaced with the following:

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- (c) Owners or operators of designated facilities planning to install the necessary air pollution control equipment to comply with the applicable requirements may petition the department for an extension of the compliance time of up to three years after the United States environmental protection agency's approval of the state plan, but not later than September 16, 2002, for the emission guidelines promulgated on September 15, 1997, and not later than October 6, 2014, for the emission guidelines promulgated on October 6, 2009, provided the facility owner or operator complies with the following:

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1. Submits a petition to the department for site specific operating parameters under 40 CFR 60.56c(i) of subpart Ec within thirty months of approval of the state plan and sixty days prior to the performance test.

 2. Provides proof to the department of a contract for obtaining services of an architectural or engineering firm or architectural and engineering firm regarding the air pollution control device within nine months of state plan approval.

 3. Submits design drawings to the department of the air pollution control device within twelve months of state plan approval.

 4. Submits to the department a copy of the purchase order or other documentation indicating an order has been placed for the major components of the air pollution control device within sixteen months after state plan approval.

 5. Submits to the department the schedule for delivery of the major components of the air pollution control device within twenty months after state plan approval.

6. Begins initiation of site preparation for installation of the air pollution control device within twenty-two months after state plan approval.
7. Begins initiation of installation of the air pollution control device within twenty-five months after state plan approval.
8. Starts up the air pollution control device within twenty-eight months after state plan approval.
9. Notifies the department of the performance test thirty days prior to the test.
10. Conducts the performance test within one hundred eighty days of the installation of the air pollution control device.
11. Submits a performance test report which demonstrates compliance within thirty-six months of state plan approval.

*60.39e(d) is deleted in its entirety and replaced with the following:

1. Designated facilities petitioning for an extension of the compliance time in paragraph b of this section shall, within six months after the United States environmental protection agency's approval of the state plan, submit:
 - i. Documentation of the analyses undertaken to support the need for more than one year to comply, including an explanation of why up to three years after United States environmental protection agency approval of the state plan is sufficient to comply with this subpart while one year is not. The documentation shall also include an evaluation of the option to transport the waste offsite to a commercial medical waste treatment and disposal facility on a temporary or permanent basis; and
 - ii. Documentation of measurable and enforceable incremental steps of progress to be taken toward compliance with this subpart.
2. The department shall review any petitions for the extension of compliance times within thirty days of receipt of a complete petition and make a decision regarding approval or denial. The department shall notify the petitioner in writing of its decision within forty-five days of the receipt of the petition. All extension approvals must include incremental steps of progress. For those sources planning on installing air pollution control equipment to comply with this subpart, the incremental steps of progress included in 40 CFR 60.39e(c) shall be included as conditions of approval of the extension.
3. Owners or operators of facilities which received an extension to the compliance time in this subpart shall be in compliance with the applicable requirements on or before the date three years after United States environmental protection agency approval of the state plan but not later than September 16, 2002, for the emission guidelines promulgated on September 15, 1997. For the amended emission guidelines published on October 6, 2009, compliance with the applicable requirements shall be attained on or before the date three years after United States environmental protection agency approval of the amended state plan but not later than October 6, 2014.

*60.39e(f) is deleted in its entirety.

After the compliance dates specified in this subpart, an owner or operator of a facility to which this subpart applies shall not operate any such unit in violation of this subpart.

Subpart D - Standards of performance for fossil-fuel fired steam generators for which construction is commenced after August 17, 1971.

Subpart Da - Standards of performance for electric utility steam generating units for which construction is commenced after September 18, 1978.

*The limits and other requirements for mercury are deleted.

Subpart Db - Standards of performance for industrial-commercial-institutional steam generating units.

Subpart Dc - Standards of performance for small industrial-commercial-institutional steam generating units.

Subpart E - Standards of performance for incinerators.

Subpart Ea - Standards of performance for municipal waste combustors for which construction is commenced after December 20, 1989, and on or before September 20, 1994.

Subpart Ec - Standards of performance for hospital/medical/infectious waste incinerators for which construction is commenced after June 20, 1996.

Subpart F - Standards of performance for portland cement plants.

Subpart G - Standards of performance for nitric acid plants.

Subpart H - Standards of performance for sulfuric acid plants.

Subpart I - Standards of performance for hot mix asphalt facilities.

Subpart J - Standards of performance for petroleum refineries.

Subpart Ja - Standards of performance for petroleum refineries for which construction, reconstruction, or modification commenced after May 14, 2007.

Those portions of the subpart that have been stayed are not adopted.

Subpart K - Standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978.

*60.110(c) is deleted in its entirety and replaced with the following:

(c) Any facility under part 60.110(a) that commenced construction, reconstruction, or modification after July 1, 1970, and prior to May 19, 1978, is subject to the requirements of this subpart.

Subpart Ka - Standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984.

Subpart Kb - Standards of performance for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984.

Subpart O - Standards of performance for sewage treatment plants.

Subpart T - Standards of performance for the phosphate fertilizer industry: wet-process phosphoric acid plants.

Subpart U - Standards of performance for the phosphate fertilizer industry: superphosphoric acid plants.

Subpart V - Standards of performance for the phosphate fertilizer industry: diammonium phosphate plants.

Subpart W - Standards of performance for the phosphate fertilizer industry: triple superphosphate plants.

Subpart X - Standards of performance for the phosphate fertilizer industry: granular triple superphosphate storage facilities.

Subpart Y - Standards of performance for coal preparation plants.

Subpart Z - Standards of performance for ferroalloy production facilities.

Subpart AA - Standards of performance for steel plants: electric arc furnaces: constructed after October 21, 1974, and before August 17, 1983.

Subpart AAa - Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels constructed after August 17, 1983.

Subpart CC - Standards of performance for glass manufacturing plants.

Subpart DD - Standards of performance for grain elevators.

Subpart EE - Standards of performance for surface coatings of metal furniture.

Subpart FF - [Reserved]

Subpart GG - Standards of performance for stationary gas turbines.

Subpart HH - Standards of performance for lime manufacturing plants.

Subpart KK - Standards of performance for lead-acid battery manufacturing plants.

Subpart LL - Standards of performance for metallic mineral processing plants.

Subpart MM - Standards of performance for automobile and light-duty truck surface coating operations.

Subpart NN - Standards of performance for phosphate rock plants.

Subpart PP - Standards of performance for ammonium sulfate manufacture.

Subpart QQ - Standards of performance for the graphic arts industry: publication rotogravure printing.

Subpart RR - Standards of performance for pressure-sensitive tape and label surface coating operations.

Subpart SS - Standards of performance for industrial surface coating: large appliances.

Subpart TT - Standards of performance for metal coil surface coating.

Subpart UU - Standards of performance for asphalt processing and asphalt roofing manufacture.

Subpart VV - Standards of performance for equipment leaks of volatile organic compound (VOC) emissions in the synthetic organic chemicals manufacturing industry.

Subpart VVa - Standards of performance for equipment leaks of VOC in the synthetic organic chemicals manufacturing industry for which construction, reconstruction, or modification commenced after November 7, 2006.

Subpart WW - Standards of performance for the beverage can surface coating industry.

Subpart XX - Standards of performance for bulk gasoline terminals.

Subpart AAA - Standards of performance for new residential wood heaters.

Subpart BBB - Standards of performance for the rubber tire manufacturing industry.

Subpart CCC - [Reserved]

Subpart DDD - Standards of performance for volatile organic compound (VOC) emissions for the polymer manufacturing industry.

Subpart EEE - [Reserved]

Subpart FFF - Standards of performance for flexible vinyl and urethane coating and printing.

Subpart GGG - Standards of performance for equipment leaks of volatile organic compound (VOC) emissions in petroleum refineries.

Subpart GGGa - Standards of performance for equipment leaks of VOC in petroleum refineries for which construction, reconstruction, or modification commenced after November 7, 2006.

Those portions of the subpart that are stayed are not adopted.

Subpart HHH - Standards of performance for synthetic fiber production facilities.

Subpart III - Standards of performance for volatile organic compound (VOC) emissions from the synthetic organic chemical manufacturing industry (SOCMI) air oxidation unit processes.

Subpart JJJ - Standards of performance for petroleum drycleaners.

Subpart KKK - Standards of performance for equipment leaks of volatile organic compound (VOC) emissions from onshore natural gas processing plants.

Subpart LLL - Standards of performance for onshore natural gas processing; SO₂ emissions.

Subpart MMM - [Reserved]

Subpart NNN - Standards of performance for volatile organic compound (VOC) emissions from synthetic organic chemical manufacturing industry (SOCMI) distillation operations.

Subpart OOO - Standards of performance for nonmetallic mineral processing plants.

Subpart PPP - Standards of performance for wool fiberglass insulation manufacturing plants.

Subpart QQQ - Standards of performance for volatile organic compound (VOC) emissions from petroleum refinery wastewater systems.

Subpart RRR - Standards of performance for volatile organic compound (VOC) emissions from synthetic organic chemical manufacturing industry (SOCMI) reactor processes.

Subpart SSS - Standards of performance for magnetic tape coating facilities.

Subpart TTT - Standards of performance for industrial surface coating: surface coating of plastic parts for business machines.

Subpart UUU - Standards of performance for calciners and dryers in mineral industries.

Subpart VVV - Standards of performance for polymeric coating of supporting substrates facilities.

Subpart WWW - Standards of performance for municipal solid waste landfills.

Subpart AAAA - Standards of performance for small municipal waste combustion units for which construction is commenced after August 30, 1999, or for which modification or reconstruction is commenced after June 6, 2001.

Subpart CCCC - Standards of performance for commercial and industrial solid waste incineration units.

Subpart DDDD - Emission guidelines and compliance times for commercial and industrial solid waste incineration units.

Except as provided below, designated facilities to which this rule applies shall comply with 40 CFR 60.2575 through 60.2875, including tables 1 through 9.

In the rule, you means the owner or operator of a commercial or industrial solid waste incineration unit.

Table 1 of the rule is deleted and replaced with the following:

<u>Table 1 to Subpart DDDD - Model Rule Increments of Progress and Compliance Schedules</u>
<u>CISWI Units That Commenced Construction on or Before November 30, 1999</u>

<u>Comply with these increments of progress</u>	<u>By these dates</u>
<u>Increment 1 - Submit final control plan</u>	<u>One year after EPA approval of the state plan or December 1, 2004, whichever comes first.</u>
<u>Increment 2 - Final compliance</u>	<u>Three years after EPA approval of the state plan or December 1, 2005, whichever comes first.</u>

Incinerator CISWI units that commenced construction after November 30, 1999, but no later than June 4, 2010, or commenced modification or reconstruction after June 1, 2001, but no later than August 7, 2013. CISWI units other than incinerator units that commenced construction on or before June 4, 2010, or commenced modification or reconstruction after June 4, 2010, but no later than August 7, 2013.

<u>Comply with these increments of progress</u>	<u>By these dates</u>
<u>Increment 1 - Submit final control plan</u>	<u>One year after EPA approval of the state plan or February 7, 2017, whichever comes first.</u>
<u>Increment 2 - Final compliance</u>	<u>Three years after EPA approval of the state plan or February 7, 2018, whichever comes first.</u>

Subpart GGGG - [Reserved]

Subpart IIII - Standards of performance for stationary compression ignition internal combustion engines.

Subpart JJJJ - Standards of performance for stationary sparks ignition internal combustion engines.

Subpart KKKK - Standards of performance for stationary combustion turbines.

Appendix A - Test methods.

Appendix B - Performance specifications.

Appendix C - Determination of emission rate changes.

Appendix D - Required emission inventory information.

Appendix E - [Reserved]

Appendix F - Quality assurance procedures.

Appendix I - Removable label and owner's manual.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-13 **EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS**

Section

33.1-15-13-01 [Reserved]

33.1-15-13-01.1 Scope

33.1-15-13-01.2 Emission Standards

33.1-15-13-02 Emission Standard for Asbestos

33.1-15-13-01. [Reserved]

33.1-15-13-01.1. Scope.

The subparts and appendices of title 40, Code of Federal Regulations, part 61, as they exist on July 2, 2010, which are listed under section 33.1-15-13-01.2 are incorporated into this chapter by reference. Any changes to the emission standard are listed below the title of the standard.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-13-01.2. Emission standards.

Subpart A - General provisions.

*61.02 - The definition of administrator is deleted and replaced with the following:

Administrator means the department except for those duties that cannot be delegated by the United States environmental protection agency. For those duties that cannot be delegated, administrator means the administrator of the United States environmental protection agency.

The following definition is added:

"Waiver of compliance" means a permit to operate with a compliance schedule.

*Sections 61.07 and 61.08 are deleted in their entirety and replaced with the following:

Application for permit to construct. The owner or operator of any new source to which a standard prescribed under these subparts is applicable, prior to the date on which construction or modification is planned to commence, shall apply for and receive a permit to construct as provided in section 33.1-15-14-02. For those sources on which construction or modification has commenced and initial startup has not occurred prior to the effective date of a standard of this chapter, the owner or operator shall apply for a permit to construct within thirty days after the effective date of the standard.

Neither the submission of an application for a permit to construct nor the administrator's approval of construction or modification shall:

- (1) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of this chapter or of any other applicable federal, state, or local requirement; or
- (2) Prevent the administrator from implementing or enforcing this chapter or taking any other action under this article.

*61.09(b) is deleted in its entirety.

*61.11(f) is deleted in its entirety and replaced with the following:

(f) The granting of a permit under this section does not abrogate the department's authority under section 33.1-15-01-06 and subsection 9 of section 33.1-15-14-02, and subsection 6 of section 33.1-15-14-03.

*61.16 is deleted in its entirety and replaced with the following:

Availability of information.

a. Emission data provided to, or otherwise obtained by, the department in accordance with the provisions of this chapter must be available to the public.

b. Any records, reports, or information, other than emission data, provided to, or otherwise obtained by, the department in accordance with the provisions of this chapter must be available to the public, except that upon a showing satisfactory to the department by any person that such records, reports, or information, or particular part thereof (other than emission data), if made public, would divulge methods or processes entitled to protection as trade secrets of such person, the department will consider such records, reports, or information, or particular part thereof, confidential in accordance with the purposes of section 1905 of title 18 of the United States Code, except that such records, reports, or information, or particular part thereof, may be disclosed to other officers, employees, or authorized representatives of the state and federal government concerned with carrying out the provisions of North Dakota Century Code chapter 23.1-06 or when relevant in any proceeding under North Dakota Century Code chapter 23.1-06.

*61.17 is deleted in its entirety.

Subpart G - [Reserved]

Subpart J - National emission standard for equipment leaks (fugitive emission sources) of benzene.

Subpart S - [Reserved]

Subpart U - [Reserved]

Subpart V - National emission standard for equipment leaks (fugitive emission sources).

Subpart FF - National emission standard for benzene waste operations.

Appendix A - National emission standards for hazardous air pollutants, compliance status information.

Appendix B - Test methods.

Appendix C - Quality assurance procedures.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-13-02. Emission standard for asbestos.

1. **Applicability.** The provisions of this section are applicable to those sources specified in subsections 3 through 17.

2. **Definitions.** All terms that are used in this section and are not defined below are given the same meaning as in North Dakota Century Code chapter 23.1-06 and in section 33.1-15-13-01.2.

a. "Active waste disposal site" means any disposal site other than an inactive site.

b. "Adequately wet" means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted; however, the absence of visible emissions is not sufficient evidence of being adequately wet.

c. "Asbestos" means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, and actinolite-tremolite.

d. "Asbestos abatement" means any demolition, renovation, salvage, repair, or construction activity which involves the repair, enclosure, encapsulation, removal, operation and maintenance, handling, or disposal of more than three square feet [0.28 square meters] or three linear feet [0.91 meters] of friable asbestos material. Asbestos abatement also means any inspections, preparation of management plans, and abatement project design for both friable and nonfriable asbestos material.

e. "Asbestos abatement project designer" means any person who develops the plans, specifications, and designs for an asbestos abatement project.

f. "Asbestos abatement project monitor" means any person, employed to monitor an asbestos removal project to ensure any of the following:

(1) The removal is conducted in accordance with state and federal regulations.

(2) State-of-the-art work practices are employed.

(3) The abatement is conducted as designed.

(4) Personal and ambient air samples are collected properly.

Persons acting as the project designer who are not responsible for the proper collection of personal and ambient air samples and employees of the asbestos removal contractor or facility owner are excluded from this definition.

g. "Asbestos abatement supervisor" means any person employed by the asbestos contractor who supervises workers engaged in asbestos removal, encapsulation, enclosure, and repair. Supervisors may include those individuals with the position title of foreman, working foreman, or leadman pursuant to collective bargaining agreements.

- h. "Asbestos-containing waste material" means asbestos mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this section. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term includes regulated asbestos-containing material waste and materials contaminated with asbestos, including disposable equipment and clothing.
- i. "Asbestos contractor" means any partnership, firm, association, operation, or sole proprietorship that contracts to perform asbestos abatement for another.
- j. "Asbestos inspector" means any person who inspects facilities for asbestos-containing materials.
- k. "Asbestos management planner" means any person who develops facility plans for the management of asbestos-containing materials.
- l. "Asbestos mill" means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos materials is not considered a part of the asbestos mill.
- m. "Asbestos tailings" means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.
- n. "Asbestos waste from control devices" means any waste material that contains asbestos and is collected by a pollution control device.
- o. "Asbestos worker" means an employee or agent of an asbestos contractor, or a public employee engaged in the abatement of more than three square feet [0.28 square meters] or three linear feet [0.91 meters] of friable asbestos material, except for individuals engaged in abatement at their private residence.
- p. "Category I nonfriable asbestos-containing material" means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos as determined using the methods specified in appendix A, subpart F, title 40, Code of Federal Regulations, part 763, section 1, polarized light microscopy.
- q. "Category II nonfriable asbestos-containing material" means any material, excluding category I nonfriable asbestos-containing material, containing more than one percent asbestos as determined using the methods specified in appendix A, subpart F, title 40, Code of Federal Regulations, part 763, section 1, polarized light microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure or by mechanical forces expected to act on the material.
- r. "Commercial asbestos" means any material containing asbestos that is extracted from ore and has value because of its asbestos content.
- s. "Cutting" means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

- t. "Demolition" means the wrecking or taking out of any load-supporting structural member of a facility, together with any related handling operations or the intentional burning of any facility.
- u. "Emergency renovation operation" means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by nonroutine failures of equipment.
- v. "Encapsulation" means a method of asbestos abatement that includes the treatment of asbestos-containing materials with a sealant material that completely surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers. A bridging encapsulant creates a membrane over the surface while a penetrating encapsulant penetrates the material and binds the material's components together.
- w. "Enclosure" means a method of asbestos abatement that includes the construction of a permanent, airtight, impermeable barrier around asbestos-containing material to prevent the release of asbestos fibers into the air.
- x. "Fabricating" means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.
- y. "Facility" means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to this section is not excluded, regardless of its current use or function.
- z. "Facility component" means any part of a facility including equipment.
- aa. "Friable asbestos-containing material" means any material containing more than one percent asbestos that hand pressure or mechanical forces expected to act on the material can crumble, pulverize, or reduce to powder when dry. The term includes nonfriable asbestos-containing material after such previously nonfirable material becomes damaged to the extent that when dry, it may be crumbled, pulverized, or reduced to powder by hand pressure. The percentage of asbestos is determined using the method specified in appendix A, subpart F, title 40, Code of Federal Regulations, part 763, section 1, polarized light microscopy. If the asbestos content is greater than zero percent, assume the material contains greater than one percent asbestos or verify the asbestos content by point counting using polarized light microscopy. If a result obtained by point count is

different from a result obtained by visual estimation, the point count result will be used.

bb. "Fugitive source" means any source of emissions not controlled by an air pollution control device.

cc. "Glove-bag" means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove-bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation, equipment and supplies, and work practices is contained in the occupational safety and health administration's (OSHA's) final rule on occupational exposure to asbestos, appendix G, title 29, Code of Federal Regulations, 1926.58.

dd. "Grinding" means to reduce to powder or small fragments and includes mechanical chipping or drilling.

ee. "In poor condition" means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

ff. "Inactive waste disposal site" means any disposal site or portion of it where additional asbestos-containing waste material has not been deposited within the past year.

gg. "Inspection" means any activity undertaken in a school building, or a public or commercial building, to determine the presence or location, or to assess the condition of, friable or nonfriable asbestos-containing material or suspected asbestos-containing material, whether by visual or physical examination, or by collecting samples of such material. This term includes reinspections of friable and nonfriable, known or assumed asbestos-containing material which has been previously identified. The term does not include the following:

(1) Periodic surveillance of the type described in title 40, Code of Federal Regulations, 763.92(b), solely for the purpose of recording or reporting a change in the condition of known or assumed asbestos-containing material;

(2) Inspections performed by employees or agents of federal, state, or local governments solely for the purpose of determining compliance with applicable statutes or regulations; or

(3) Visual inspections of the types described in title 40, Code of Federal Regulations, 763.90(l), solely for the purpose of determining completion of response actions.

hh. "Installation" means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

ii. "Leaktight" means that solids or liquids cannot escape or spill out. It also means dusttight.

jj. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual

manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operations, or any other preventable upset conditions, equipment breakdown, or process failure.

kk. "Manufacturing" means the combining of commercial asbestos, or in the case of woven friction products, the combining of textiles containing commercial asbestos, with any other materials, including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

ll. "Natural barrier" means a natural object that effectively precludes or deters access. Natural barriers include physical obstacles such as cliffs, lakes, or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

mm. "Nonfriable asbestos-containing material" means any material containing more than one percent asbestos as determined using the method specified in appendix A, subpart F, title 40, Code of Federal Regulations, part 763, section 1, polarized light microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure or mechanical forces expected to act on the material.

nn. "Nonscheduled renovation operation" means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

oo. "Outside air" means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open ferry dock.

pp. "Owner or operator of a demolition or renovation activity" means any person who owns, leases, operates, controls, or supervises a facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operations, or both.

qq. "Particulate asbestos material" means finely divided particles of asbestos or material containing asbestos.

rr. "Planned renovation operations" means a renovation operation, or a number of such operations, in which some regulated asbestos-containing material will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

ss. "Public and commercial building" means the interior space of any building which is not a school building, except that the term does not include any residential apartment building of fewer than ten units or detached single-family homes. The term includes, industrial and office buildings, residential apartment buildings and condominiums of ten or more dwelling units, government-owned buildings, colleges, museums, airports, hospitals, churches, preschools, stores,

warehouses, and factories. Interior space includes exterior hallways connecting buildings, porticos, and mechanical systems used to condition interior space.

tt. "Public employee" for the purpose of this chapter means any person employed by the United States government or the state of North Dakota or any of its political subdivisions who provides service for which compensation is paid. This includes employment by appointment or election.

uu. "Regulated asbestos-containing material (RACM)" means:

(1) Friable asbestos material.

(2) Category I nonfriable asbestos-containing material that has become friable.

(3) Category I nonfriable asbestos-containing material that will be or has been subjected to sanding, grinding, cutting, or abrading.

(4) Category II nonfriable asbestos-containing material that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces acting on or expected to act on the material in the course of demolition or renovation operations regulated by this section.

vv. "Remove" means to take out regulated asbestos-containing material or facility components that contain or are covered with regulated asbestos-containing material from any facility.

ww. "Renovation" means altering in any way a facility or facility components, including the stripping or removal of regulated asbestos-containing material from a facility component. Operations in which load-supporting structural members are wrecked or taken out are demolitions.

xx. "Repair" means returning damaged asbestos-containing materials to an undamaged condition or to an intact state so as to prevent asbestos fiber release.

yy. "Resilient floor covering" means asbestos-containing floor tile, including asphalt and vinyl floor tiles and sheet vinyl floor covering containing more than one percent asbestos as determined using polarized light microscopy according to the methods specified in appendix A, subpart F, title 40, Code of Federal Regulations, part 763, section 1, polarized light microscopy.

zz. "Roadways" means surfaces on which motor vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

aaa. "Strip" means to take off regulated asbestos-containing material from any part of any facility or facility components.

bbb. "Structural member" means any member of a facility, such as beams, walls, ceilings, floors, etc.

ccc. "Visible emissions" means any emissions which are visually detectable without the aid of instruments, coming from regulated asbestos-containing material or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operations. This does not include condensed uncombined water vapor.

ddd. "Waste generator" means any owner or operator of a source covered by this section whose act or process produces asbestos-containing waste material.

eee. "Waste shipment record" means the shipping document, required to be originated and signed by the waste generator and is used to track and substantiate the disposition of asbestos-containing waste material.

fff. "Working day" means any day Monday through Friday and includes holidays that fall on any day Monday through Friday.

3. Standard for asbestos mills.

a. Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill, including fugitive sources, or use the methods specified by subsection 13 to clean emissions containing asbestos material before they escape to, or are vented to, the outside air.

b. Each owner or operator of an asbestos mill shall meet the following requirements:

(1) Monitor each potential source of asbestos emissions from any part of the mill facility, including air-cleaning devices, process equipment, and buildings that house equipment for material processing and handling, at least once each day during daylight hours for visible emissions to the outside air during periods of operation. The monitoring must be by visual observation of at least fifteen seconds duration per source of emissions.

(2) Inspect each air-cleaning device at least once each week for proper operation and for changes that signal the potential for malfunction, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air-cleaning devices that can not be inspected on a weekly basis according to this paragraph, submit to the department, and revise as necessary, a written maintenance plan to include, at a minimum, the following:

(a) Maintenance schedule.

(b) Recordkeeping plan.

(3) Maintain records of the results of visible emissions monitoring and air-cleaning device inspections using a suitable form which includes the following information:

(a) Date and time of each inspection.

(b) Presence or absence of visible emissions.

(c) Condition of fabric filters, including presence of any tears, holes, and abrasions.

(d) Presence of dust deposits on clean side of fabric filters.

(e) Brief description of corrective actions taken including date and time.

- (f) Daily hours of operation for each air-cleaning device.
 - (4) Furnish upon request and make available at the affected facility during normal business hours for inspection by the department all records required under this subdivision.
 - (5) Retain a copy of all monitoring inspection records for at least two years.
 - (6) Submit quarterly a copy of visible emissions monitoring records to the department if visible emissions occurred during the report period. Quarterly reports must be postmarked by the thirtieth day following the end of the calendar quarter.
4. **Standard for roadways.** No person may surface a roadway with asbestos tailings or asbestos-containing waste material.
5. **Standard for manufacturing.**
- a. Applicability. This section applies to the following manufacturing operations using commercial asbestos.
 - (1) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap, or other textile materials.
 - (2) The manufacture of cement products.
 - (3) The manufacture of fireproofing and insulating materials.
 - (4) The manufacture of friction products.
 - (5) The manufacture of paper, millboard, and felt.
 - (6) The manufacture of resilient floor covering.
 - (7) The manufacture of paints, coatings, caulks, adhesives, and sealants.
 - (8) The manufacture of plastics and rubber materials.
 - (9) The manufacture of chlorine utilizing asbestos diaphragm technology.
 - (10) The manufacture of shotgun shell wads.
 - (11) The manufacture of asphalt concrete.
 - b. Standard. Each owner or operator of any of the manufacturing operations to which this section applies shall either:
 - (1) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted or from any other fugitive sources; or
 - (2) Use the methods specified by subsection 13 to clean emissions containing asbestos material from these operations before they escape to, or are vented to, the outside air.

- (3) Monitor each potential source of asbestos emissions from any part of the manufacturing facility, including air-cleaning devices, process equipment, and buildings housing material processing and handling equipment, at least once each day during daylight hours for visible emission to the outside air during periods of operation. The monitoring must be by visual observation of at least fifteen seconds duration per source of emissions.
- (4) Inspect each air-cleaning device at least once each week for proper operation and for changes that signal the potential for malfunctions, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air-cleaning devices that cannot be inspected on a weekly basis according to this paragraph, submit to the department, and revise as necessary, a written maintenance plan to include, at a minimum, the following:
- (a) Maintenance schedule.
- (b) Recordkeeping plans.
- (5) Maintain records of the results of visible emission monitoring and air-cleaning device inspections using a suitable form which includes the following information:
- (a) Date and time of each inspection.
- (b) Presence or absence of visible emissions.
- (c) Condition of fabric filters, including presence of any tears, holes, and abrasions.
- (d) Presence of dust deposits on clean side of fabric filters.
- (e) Brief description of corrective action taken, including date and time.
- (f) Daily hours of operation for each air-cleaning device.
- (6) Furnish upon request and make available at the affected facility during normal business hours for inspection by the department all records required under this subdivision.
- (7) Retain a copy of all monitoring and inspection records for at least two years.
- (8) Submit quarterly a copy of the visible emissions monitoring records to the department if visible emissions occurred during the report period. Quarterly reports must be postmarked by the thirtieth day following the end of the calendar quarter.

6. Standard for demolition and renovation.

- a. Applicability. To determine which requirements of subdivisions a, b, and c of this subsection apply to the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility, or part of the facility where the demolition or

renovation operation will occur, for the presence of asbestos, including category I and category II nonfriable asbestos-containing material. The requirements of subdivisions b and c of this subsection apply to each owner or operator of an asbestos demolition or renovation operation, including the removal of regulated asbestos-containing material, as follows:

(1) For a demolition or renovation project involving the stripping or removal of more than three square feet [0.28 square meters] or three linear feet [0.91 meters] of regulated asbestos-containing material, all the procedural requirements of subdivision c apply, except for ordered demolitions as provided in paragraph 4.

(2) For any facility being demolished, all the notification requirements of subdivision b apply.

(3) For a renovation project where at least one hundred sixty square feet [14.9 square meters] of regulated asbestos-containing material on facility components or at least two hundred sixty linear feet [79.3 meters] of regulated asbestos-containing material on pipes or a total of thirty-five cubic feet [1 cubic meter] of regulated asbestos-containing material on or off facility components are to be stripped, removed, dislodged, cut, drilled, or similarly disturbed at a facility all the notification requirements of subdivision b apply.

(a) To determine whether this paragraph applies to planned renovation operations involving individual nonscheduled operations, predict the additive amount of regulated asbestos-containing material to be removed or stripped over the maximum period of time a prediction can be made, not to exceed one calendar year of January first through December thirty-first.

(b) To determine whether this paragraph applies to emergency renovation operations, estimate the amount of regulated asbestos-containing material to be removed or stripped as a result of the sudden unexpected event that necessitated the renovation.

(4) If the facility is being demolished under an order of a state or local government agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements of subdivision b and paragraphs 4, 5, 6, 7, and 8 of subdivision c apply.

(5) Owners or operators of demolition or renovation operations are exempt from the requirements of 61.05(a), 61.07, and 61.09 of the general provisions of this chapter.

b. Notification requirements. Each owner or operator to which this section applies shall:

(1) Provide the department with written notice of the intention to demolish or renovate.

- (2) Indicate whether the notice is an original or a revised notification and update the notice as necessary, including when the amount of asbestos affected changes by at least twenty percent.
- (3) Postmark or deliver the notice as follows:
- (a) At least ten working days before demolition begins, except as provided in subparagraph b.
 - (b) As early as possible before, but not later than the following working day after, demolition begins if the operation is described in paragraph 4 of subdivision a or for an emergency renovation as described in subparagraph b of paragraph 3 of subdivision a of this subsection.
 - (c) At least ten working days before the end of the calendar year preceding the year for which notice is being given for renovations described in subparagraph a of paragraph 3 of subdivision a of this subsection.
 - (d) At least ten working days before renovation begins. When necessary, the department may accept a telephone notification followed by the written notification.
 - (e) In no event may an operation covered by this subsection begin on a date other than the date contained in the written notice unless the department has been supplied a properly amended notification following the timetables outlined above.
- (4) Include the following information on a notification form provided by the department:
- (a) Name, address, and telephone number of both the owner and operator and the asbestos removal contractor.
 - (b) Description of the facility or affected part of the facility being demolished or renovated, including the size, age, and prior and present use of the facility.
 - (c) An estimate of the amount of regulated asbestos-containing material to be removed from the facility in terms of square feet, linear feet, or cubic feet, as appropriate. Also estimate the approximate amount of category I and category II nonfriable asbestos-containing material in the affected part of the facility that will not be removed before demolition. Also provide the procedures and analytical methods used to detect the presence and determine the quantity of regulated asbestos-containing material and category I and category II nonfriable asbestos-containing material.
 - (d) Location of the facility being demolished or renovated to include the street address, city, county, and state.
 - (e) Scheduled starting and completion dates of the asbestos abatement work or any other activity that would break up, dislodge, or similarly disturb asbestos material.

- (f) Scheduled starting and completion dates of the demolition or renovation.

- (g) Type of operation: demolition or renovation.

- (h) A description of the demolition or renovation work to be performed, including the demolition or renovation techniques and methods to be employed during the activity and a description of the affected facility components.

- (i) Description of work practices and engineering controls to be used to comply with the requirements of this section, including asbestos removal and waste handling emission control procedures.

- (j) The name and location of the waste disposal site where the asbestos-containing waste material will be deposited.

- (k) The name, address, and telephone number of the waste transporter.

- (l) For emergency renovations, provide the date and hour that the emergency occurred, a description of the sudden unexpected event, and an explanation of how the event caused an unsafe condition or would cause equipment damage or an unreasonable financial burden.

- (m) Description of procedures to be followed in the event that unexpected regulated asbestos-containing material is found or category II nonfriable asbestos-containing material becomes crumbled, pulverized, or reduced to powder during the operation.

- (n) For facilities described in paragraph 4 of subdivision a, the name, title, and authority of the state or local governmental representative who has ordered the demolition, the date that the order was issued, and the date on which the demolition was ordered to begin. A copy of the order must be attached to the notification.

- (o) A signed statement by the contractor that all asbestos abatement supervisors and asbestos workers assigned to this project are certified by the department, in accordance with subsection 16.

- c. Procedures for asbestos emission control. Each owner or asbestos contractor to whom this subsection applies shall comply with the following procedures:

 - (1) Remove all regulated asbestos-containing material from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the materials or preclude access to the materials for subsequent removal. Asbestos-containing material need not be removed before demolition if:

 - (a) It is category I nonfriable asbestos-containing material that is not in poor condition and is not friable.

 - (b) It is on a facility component that is encased in concrete or other similarly hard material and adequately wetted whenever exposed

during demolition and maintained wet until it is disposed of in accordance with subsection 11.

(c) It was not accessible for testing and therefore was not discovered before demolition began and the material cannot be safely removed. If not removed for safety reasons, these materials must be adequately wetted when exposed during demolition and maintained wet until they are disposed of in accordance with subsection 11.

(d) They are category II nonfriable asbestos-containing material and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition.

(2) When a facility component that contains, is covered with, or is coated with regulated asbestos-containing material is being taken out of the facility as a unit or in sections:

(a) Adequately wet all regulated asbestos-containing material exposed during cutting or disjoining operations; and

(b) Carefully wrap or otherwise contain the facility member with an impermeable covering prior to the disjoining operation; and

(c) Carefully lower the units or sections to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the regulated asbestos-containing material.

(3) When regulated asbestos-containing material is being stripped from a facility component while it remains in place in a facility, adequately wet the material during the stripping operation.

(a) In renovation operations, wetting that would unavoidably damage equipment or present a safety hazard is not required if:

[1] The owner or operator has obtained prior written approval from the department based on a written application that wetting to comply with this paragraph would unavoidably damage equipment or present a safety hazard; and

[2] The owner or operator uses one of the following emission control methods:

[a] A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air and be equipped with high efficiency particulate air filtration or be designed and operated in accordance with the requirements in subsection 13.

[b] A glove-bag system designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials.

[c] Leaktight wrapping to contain all regulated asbestos-containing material prior to dismantlement.

(b) In renovation operations where wetting would result in equipment damage or a safety hazard and the methods allowed in subparagraph a of paragraph 3 of this subdivision cannot be used, another method may be used after obtaining written approval from the department based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in paragraph 3 of this subdivision.

(c) A copy of the department's written approval must be kept at the worksite and made available for inspection.

(4) After a facility component covered with, coated with, or containing regulated asbestos-containing material has been taken out of the facility as units or in sections pursuant to paragraph 2 of this subdivision it must be kept contained in leaktight wrapping or:

(a) Adequately wet the regulated asbestos-containing material during stripping; or

(b) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system must exhibit no visible emissions to the outside air and be equipped with high-efficiency particulate air filtration or be designed and operated in accordance with the requirements in subsection 13.

(5) For large facility components such as reactor vessels, large tanks, and steam generators, but not beams (which must be handled in accordance with paragraphs 2, 3, and 4 of this subdivision) the regulated asbestos-containing material is not required to be stripped if the following requirements are met:

(a) The component is removed, transported, stored, disposed of, or reused without disturbing or damaging the regulated asbestos-containing material;

(b) The component is encased in a leaktight wrapping; and

(c) The leaktight wrapping is labeled according to subsection 11 during all loading and unloading operations and during storage.

(6) For all regulated asbestos-containing material, including material that has been removed or stripped:

(a) Adequately wet the material and ensure that it remains wet until collected for disposal in accordance with subsection 11;

(b) Carefully lower the materials to the ground or a lower floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material; and

(c) Transport the materials to the ground via leaktight chutes or containers if they have been removed or stripped more than fifty feet [15.24 meters] above ground level and were not removed as units or in sections.

Regulated asbestos-containing material contained in leaktight wrapping that has been removed in accordance with paragraph 4 of this subdivision and subitem c of item 2 of subparagraph a of paragraph 3 of this subdivision need not be wetted.

(7) When the temperature at the point of wetting is below zero degrees Celsius [32 degrees Fahrenheit], the owner or operator:

(a) Need not comply with the wetting requirements of subparagraph a of paragraph 2 of subdivision c of subsection 4 and paragraph 3 of this subdivision. The owner or operator shall comply with the other requirements in this subdivision; and

(b) Remove facility components containing, coated with or covered with friable asbestos materials as units or in sections to the maximum extent possible; and

(c) During periods when wetting operations are suspended due to freezing temperatures, the owner or operator must record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records. These records must be available for inspection by the department during normal business hours at the demolition or renovation site. The owner or operator shall retain the temperature records for at least two years.

(8) No regulated asbestos-containing material may be stripped, removed, or otherwise handled or disturbed at a facility regulated by this subsection unless at least one onsite representative such as a supervisor, foreman or management level person, or other authorized representative who has completed the supervisor training requirements of subparagraph a of paragraph 2 and paragraph 4 of subdivision b of subsection 16 is present. Evidence that the required training has been completed shall be posted and made available for inspection by the department at the demolition or renovation site.

(9) For facilities described in paragraph 4 of subdivision a, adequately wet the portion of the facility that contains friable asbestos materials during the wrecking operation.

(10) If a facility is demolished by intentional burning, all regulated asbestos-containing material, including category I and category II nonfriable asbestos-containing material must be removed in accordance with this subsection before burning.

(11) When a demolition or renovation project that involves the disturbance of regulated asbestos-containing material is conducted in the ambient air, the owner or operator shall designate the boundaries of the work area by appropriate means.

7. **Standard for spraying.** The owner or operator of an operation in which asbestos-containing materials are spray-applied shall use only those materials that contain one percent asbestos or less for spray-on application.

8. **Standard for fabricating.**

a. **Applicability.** This subsection applies to the following fabricating operations using commercial asbestos:

(1) The fabrication of cement building products.

(2) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.

(3) The fabrication of cement or silicate board for ventilation hoods; ovens; electrical panels; laboratory furniture; bulkheads, partitions, and ceilings for marine construction; and flow control devices for the molten metal industry.

b. **Standard.** Each owner or operator of any of the fabricating operations to which this subsection applies shall:

(1) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted or from any other fugitive sources; or

(2) Use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) Monitor each potential source of asbestos emissions from any part of the fabricating facility, including air-cleaning devices, process equipment, and buildings that house equipment for material processing and handling, at least once each day during daylight hours, for visible emissions to the outside air during periods of operation. The monitoring must be by visual observation of at least fifteen seconds duration per source of emissions.

(4) Inspect each air-cleaning device at least once each week for proper operation and for changes that signal the potential for malfunction, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air-cleaning devices that cannot be inspected on a weekly basis according to this paragraph, submit to the department, and revise as necessary, a written maintenance plan to include at a minimum, the following:

(a) Maintenance schedule.

(b) Recordkeeping plan.

(5) Maintain records of the results of visible emission monitoring and air-cleaning device inspections using a suitable form which includes the following information:

(a) Date and time of each inspection.

- (b) Presence or absence of visible emissions.
- (c) Condition of fabric filters, including the presence of any tears, holes, and abrasions.
- (d) Presence of dust deposits on clean side of fabric filters.
- (e) Brief description of corrective actions taken, including date and time.
- (f) Daily hours of operation for each air-cleaning device.
- (6) Furnish upon request and make available at the affected facility during normal business hours, for inspection by the department, all records required under this section.
- (7) Retain a copy of all monitoring and inspection records for at least two years.
- (8) Submit quarterly a copy of the visible emission monitoring record to the department if visible emissions occurred during the report period. Quarterly reports must be postmarked by the thirtieth day following the end of the calendar quarter.
- 9. **Standard for insulating materials.** No owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this subsection do not apply to spray-applied insulating materials regulated under subsection 7.
- 10. **Standard for waste disposal for asbestos mills.** Each owner or operator of any source covered under the provisions of subsection 3 shall:
 - a. Deposit all asbestos-containing waste material at department-approved waste disposal sites operated in accordance with the provisions of subsection 15.
 - b. Discharge no visible emissions to the outside air from the transfer of asbestos waste from control devices to the tailings conveyor, or use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with subdivision b of subsection 11 or subdivision c of this subsection.
 - c. Discharge no visible emissions to the outside air during the collection, processing, packaging, transporting, or deposition of any asbestos-containing waste material, or use one of the disposal methods as follows:
 - (1) Use a wetting agent as follows:
 - (a) Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the particular dust by the manufacturer of the agent.

- (b) Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.
- (c) Wetting may be suspended when the ambient temperature at the waste disposal site is less than fifteen degrees Fahrenheit [-9.44 degrees Celsius] as determined by an appropriate measurement method with an accuracy of plus or minus two degrees Fahrenheit [1.11 degrees Celsius]. During periods when wetting operations are suspended, the temperature must be recorded at least at hourly intervals, and records must be retained for at least two years in a form suitable for inspection.
- (2) Use an alternative emission control and treatment method that has received prior written approval by the department and administrator. To obtain approval for an alternative method, a written application must be submitted to the department and the administrator of the United States environmental protection agency demonstrating that the following criteria are met:
 - (a) The alternative method will control asbestos emissions equivalent to currently required methods.
 - (b) That the alternative method is suitable for the intended application.
 - (c) The alternative method will not violate other regulations.
 - (d) The alternative method will not result in increased water pollution, land pollution, or occupational hazards.
- (3) When waste is transported by vehicle to a disposal site, all of the requirements of subdivision d of subsection 11 must be complied with.

11. Standard for waste disposal for manufacturing, demolition, renovation, spraying, and fabricating operations. Each owner or operator of any source covered under any of the provisions of subsection 5, 6, 7, or 8 shall comply with all the provisions of this subsection. Each owner or operator of any source covered by subsection 10 shall comply with subdivision d of this subsection.

- a. Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, transporting, or deposition of any asbestos-containing waste material generated by the source, or use one of the emission control and waste treatment methods as follows:
 - (1) Adequately wet asbestos-containing waste material as follows:
 - (a) Mix asbestos waste from control devices with water to form a slurry; adequately wet other asbestos-containing waste material;
 - (b) Discharge no visible emissions to the outside air from collection, mixing, and wetting operations, or use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air;

(c) After wetting, seal all asbestos-containing waste material in leaktight containers while wet. For materials that will not fit into containers without additional breaking, put materials into leaktight wrapping;

(d) Label the containers or wrapped materials specified above as follows:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Alternatively, use warning labels currently specified by occupational safety and health standards of the department of labor, occupational safety and health administration (OSHA) under title 29, Code of Federal Regulations, 1910.1001 or title 29, Code of Federal Regulations, 1926.1101(k)(8); and

(e) For asbestos-containing waste material to be transported off the facility site, label containers or wrapped materials with the name of the waste generator and the location at which the waste was generated.

(2) Process asbestos-containing waste material into nonfriable forms as follows:

(a) Form all asbestos-containing waste material into nonfriable pellets or other shapes.

(b) Discharge no visible emissions to the outside air from the collection and processing operations, including incineration, or use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) For facilities demolished where the regulated asbestos-containing material is not removed prior to demolition according to paragraph 4 of subdivision a and subparagraphs a, b, c, and d of paragraph 1 of subdivision c of subsection 6 adequately wet asbestos-containing waste material at all times during and after demolition and keep wet during handling and loading for transport to a disposal site. Asbestos-containing waste materials covered by this paragraph do not have to be sealed in leaktight containers or wrapping but may be transported by covered hauling and disposed of in bulk.

(4) Use an alternative disposal method that has received prior approval by the department and administrator of the United States environmental protection agency.

(5) As applied to demolition and renovation, the requirements of subdivision a of this subsection do not apply to category I or category II nonfriable asbestos-containing material waste that is not or will not become crumbled, pulverized, or reduced to powder.

b. Deposit all asbestos-containing waste material as soon as practical at:

(1) Department-approved waste disposal sites operated in accordance with the provisions of subsection 15.

(2) A United States environmental protection agency-approved site that converts regulated asbestos-containing material and asbestos-containing waste material into nonasbestos (asbestos free) material according to the provisions of subsection 17.

(3) The requirements of this subdivision do not apply to category I nonfriable asbestos-containing material that is not or will not become regulated asbestos-containing material.

c. All facilities used for the temporary storage of asbestos-containing waste material must be controlled and the material must be stored in leaktight containers.

(1) Post a warning sign at the entrances to the temporary storage facility with a label as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

Alternatively, use warning labels currently specified by occupational safety and health standards of the department of labor, occupational safety and health administration (OSHA) under title 29, Code of Federal Regulations, 1910.1001 or title 29, Code of Federal Regulations, 1926.58.

(2) Take necessary precautions to prevent or restrict access to the temporary storage facility.

(3) The temporary storage facility must be inspected at least once per week to ensure that good structural integrity of the storage facility is maintained and that the facility remains secure.

(4) The maximum length of time allowed for temporary storage of an asbestos-containing waste material may not exceed one hundred eighty days.

d. Mark vehicles used to transport asbestos-containing waste material during the loading and unloading of waste so that the signs are visible. The markings must:

(1) Be displayed in such a manner and location that a person can easily read the legend.

(2) Conform to the requirements for twenty-inch by fourteen-inch [50.8-centimeter by 35.56-centimeter] upright format signs specified in title 29, Code of Federal Regulations, 1910.145(d)(4) and this paragraph; and

(3) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

<u>Legend</u>	<u>Notation</u>
<u>DANGER</u>	<u>2.5 cm [1 in.] Sans Serif, Gothic, or Block.</u>
<u>ASBESTOS DUST HAZARD</u>	<u>2.5 cm [1 in.] Sans Serif, Gothic, or Block.</u>
<u>CANCER AND LUNG DISEASE</u>	<u>1.9 cm [3/4 in.] Sans Serif, Gothic, or Block.</u>

HAZARD

Authorized Personnel Only

14 Point Gothic

Spacing between any two lines must be at least equal to the height of the upper of the two lines.

e. Prior to transportation of more than three square feet [0.28 square meters] or three linear feet [0.91 meters] of asbestos-containing waste material off the facility site:

(1) The owner or operator and the transporter shall ensure that a waste shipment record has been appropriately completed and signed by the generator, and accompanies the waste to the disposal site. The waste shipment record must include the following information:

(a) Name, address, and telephone number of the facility owner or operator where the asbestos-containing waste materials were generated.

(b) Location of the facility where asbestos-containing waste material was generated.

(c) The name and address of this department as being the responsible agency for administering the asbestos NESHAP program.

(d) Estimated quantity of asbestos-containing waste material in cubic yards.

(e) Name and physical site location of the waste disposal site where the asbestos-containing waste will be deposited.

(f) The name and telephone number of the disposal site operator.

(g) The date transported.

(h) The name, address, and telephone number of the transporters.

(i) A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and government regulations.

(2) Provide a copy of the waste shipment record to the disposal site owner or operator at the same time as the asbestos-containing waste material is delivered to the disposal site.

(3) For waste shipments where a copy of the waste shipment record signed by the owner or operator of the designated disposal site is not received by the waste generator within thirty-five days of the date the waste was accepted by the initial transporter, contact the transporter or the owner or operator, or both, of the designated disposal site to determine the status of the waste shipment.

- (4) Report in writing to this department if a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site is not received by the waste generator within forty-five days of the date the waste was accepted by the initial transporter. Include in the report the following information:
 - (a) A copy of the waste shipment record for which a confirmation of delivery was not received; and
 - (b) A cover letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the result of those efforts.
- (5) Retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner or operator of the designated waste disposal site for at least two years.
- (6) A copy of the completed waste shipment record must be submitted to the department by the owner or operator of the facility no later than ten days after the owner or operator of the facility receives the completed waste shipment record from the landfill operator.
- f. Furnish upon request, and make available for inspection by the department, all records required under this section.
- g. If an acceptable disposal site, as determined by subsection 15, is located on the same property as the facility where asbestos-containing waste materials were generated, then the recordkeeping requirements of subdivision e of this subsection do not apply. The owner shall maintain records which include information on the quantity, location, and date of asbestos-containing waste disposal activities.

12. Standard for inactive waste disposal sites for asbestos mills and manufacturing and fabricating operations. Each owner or operator of any inactive waste disposal site that received deposits of asbestos-containing waste material generated by sources covered under subsection 3, 5, 8, or 10, shall:

- a. Comply with one of the following:
 - (1) Discharge no visible emissions to the outside air from an inactive waste disposal site subject to this subsection;
 - (2) Cover the asbestos-containing waste material with at least fifteen centimeters [6 inches] of compacted non-asbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material;
 - (3) In areas where vegetation would be difficult to maintain, cover the asbestos-containing waste material with at least sixty centimeters [2 feet] of compacted non-asbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste or cover with at least six inches [15.24 centimeters] of compacted non-asbestos-containing material and at least an additional three inches [7.62 centimeters] of a nonasbestos crushed rock cover in place of the vegetation; or

(4) For inactive waste disposal sites for asbestos tailings, apply a resinous-based or petroleum-based dust suppression agent that effectively binds dust to control surface air emissions. Use the agent in the manner and frequency recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent. Obtain prior approval of the department to use other equally effective dust suppression agents. For purposes of this paragraph, used, spent, or other wasteoil is not considered a dust suppression agent.

b. Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with paragraph 2 or 3 of subdivision a of this subsection.

(1) Display warning signs at all entrances and at intervals of three hundred twenty-eight feet [100 meters] or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs must:

(a) Be posted in such a manner and location that a person can easily read the legend.

(b) Conform to the requirements for fifty-one-centimeter by thirty-six-centimeter [20-inch by 14-inch] upright format signs specified in title 29, Code of Federal Regulations, 1910.145(d)(4) and this subdivision.

(c) Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

<u>Legend</u>	<u>Notation</u>
<u>DANGER</u>	<u>2.5 cm [1 in.] Sans Serif, Gothic, or Block.</u>
<u>ASBESTOS DUST HAZARD</u>	<u>2.5 cm [1 in.] Sans Serif, Gothic, or Block.</u>
<u>CANCER AND LUNG DISEASE HAZARD</u>	<u>1.9 cm [3/4 in.] Sans Serif, Gothic, or Block.</u>
<u>Authorized Personnel Only</u>	<u>14 Point Gothic</u>

Spacing between any two lines must be at least equal to the height of the upper two lines.

(2) Fence the perimeter of the site in a manner adequate to deter access by the general public.

(3) Upon request and supply of appropriate information, the department will determine whether a fence or a natural barrier adequately deters access by the general public.

c. The owner or operator may use an alternative control method that has received prior approval of the department and administrator of the United States environmental protection agency rather than comply with the requirements of subdivision a or b of this subsection.

d. Notify the department, in writing, at least forty-five days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site under this section and follow the procedures specified in the notification. If the excavation will begin on a date other than the one contained in the original notice, notice of a new start date must be provided to the department at least ten days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:

(1) Scheduled starting and completion dates.

(2) Reason for disturbing the waste.

(3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the department may require changes in the emission control procedures to be used.

(4) Location of any temporary storage site and the final disposal site.

e. Within sixty days of a site becoming inactive, record in accordance with state law a notation on the deed to the facility property and on any instrument that would normally be examined during a title search. This notation will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used for the disposal of asbestos-containing waste material;

(2) The survey plot and record of the location and quantity of asbestos-containing waste disposed of within the disposal site required in subdivision f of subsection 15 have been filed with the department; and

(3) The site is subject to this section.

13. Air-cleaning.

a. The owner or operator who elects to use air-cleaning, as permitted in subsections 3, 5, 6, 7, 8, 10, and 11 shall:

(1) Use fabric filter collection devices except as noted in subdivision b of this subsection, doing all of the following:

(a) Ensuring that the airflow permeability, as determined by A.S.T.M. method D737-75, does not exceed nine $m^3/min/m^2$ [$30 ft^3/min/ft^2$] for woven fabrics or eleven $m^3/min/m^2$ [$35 ft^3/min/ft^2$] for felted fabrics, except that twelve $m^3/min/m^2$ [$40 ft^3/min/ft^2$] for woven and fourteen $m^3/min/m^2$ [$45 ft^3/min/ft^2$] for felted fabrics is allowed for filtering air from asbestos ore dryers.

(b) Ensuring that felted fabric weighs at least four hundred seventy-five grams per square meter [14 ounces per square yard] and is at least one and six-tenths millimeters [$1/16$ inch] thick throughout.

(c) Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(2) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this subsection. Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the asbestos material.

(3) For fabric filters installed after January 10, 1989, provide for easy inspection for faulty bags.

b. There are the following exceptions to paragraph 1 of subdivision a:

(1) If the use of fabric creates a fire or explosion hazard or the department determines that a fabric filter is not feasible, the department may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals [40 inches water gauge pressure].

(2) Use a high-efficiency particulate air filter that is certified to be at least ninety-nine and ninety-seven hundredths percent efficient for particles with a diameter size of three-tenths microns and greater.

(3) The department and administrator of the United States environmental protection agency may authorize the use of filtering equipment other than that described in subdivisions a and b of this subsection if the owner or operator demonstrates to the administrator and the department's satisfaction that it is equivalent to the described equipment in filtering asbestos material.

14. Reporting.

a. Any existing source to which this section applies (with the exception of sources subject to subsections 4, 6, 7, and 9) which has not previously supplied a notice to this department or the administrator, shall provide such notice within ninety days of the effective date of this regulation. Any new source to which this section applies shall provide notice to this department within ninety days of the effective startup date of the source. Changes to the information provided in a notice must be submitted to this department within thirty days of the change taking place. The notice shall provide the following information to the department:

(1) A description of the emission control equipment used for each process; and

(2) If a fabric filter device is used to control emissions:

(a) The airflow permeability in $m^3/min/m^2$ if the fabric filter device uses a woven fabric and; if the fabric is synthetic, whether the fill yarn is spun or not spun.

(b) If the fabric filter device uses a felted fabric, the density in g/m^2 , the minimum thickness in millimeters, and the airflow permeability in $m^3/min/m^2$.

(3) If a high-efficiency particulate air filter is used to control emissions, the certified efficiency.

(4) For sources subject to subsections 10 and 11:

- (a) A brief description of each process that generates asbestos-containing waste material;
- (b) The average volume of asbestos-containing waste material disposed of in cubic yards per day;
- (c) The emission control methods used in all stages of waste disposal; and
- (d) The type of disposal site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(5) For sources subject to subsections 12 and 15:

- (a) A brief description of the site; and
- (b) The method or methods used to comply with the standard, or alternative procedures to be used.

b. The information required by subdivision a of this subsection must accompany the information required by 40 Code of Federal Regulations 61.10. Active waste disposal sites subject to subsection 15 shall also comply with this provision. Roadways, demolition and renovations, spraying, and insulating materials are exempted from the requirements of 40 Code of Federal Regulations 61.10(a).

15. Standard for active waste disposal sites. To be an acceptable site for disposal of asbestos-containing waste material under subsections 10, 11, and 17, an active waste disposal site must meet the requirements of this subsection.

- a. Either there shall be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of subdivisions c and d of this subsection must be met.
- b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of paragraph 1 of subdivision c of this subsection must be met.

(1) Warning signs must be displayed at all entrances and at intervals of three hundred twenty-eight feet [100 meters] or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

- (a) Be posted in such a manner and location that a person may easily read the legend.
- (b) Conform to the requirements of fifty-one centimeters by thirty-six centimeters [20 inches by 14 inches] upright format signs specified in title 29, Code of Federal Regulations, 1910.145(d)(4), and this subsection.
- (c) Display the following legend in the lower panel, with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend

Notation

Asbestos Waste Disposal Site 2.5 cm [1 in.] Sans Serif, Gothic, or Block

Avoid Creating Dust 1.9 cm [3/4 in.] Sans Serif, Gothic, or Block

Breathing Asbestos Dust May

Cause Lung Disease and Cancer 14 Point Gothic

Spacing between lines must be at least equal to the height of the upper two lines.

(2) The perimeter of the disposal site must be fenced in order to adequately deter access by the general public.

(3) Upon request and supply of appropriate information, the department will determine whether a fence or a natural barrier adequately deters access by the general public.

c. Rather than meet the no visible emission requirements of subdivision a of this subsection, an active waste disposal site would be an acceptable site if at the end of each operating day, or at least once every twenty-four-hour period while the site is in continuous operation, the asbestos-containing waste material which was deposited at the site during the operating day or previous twenty-four-hour period is covered with either:

(1) At least fifteen centimeters [6 inches] of compacted non-asbestos-containing material; or

(2) A resinous-based or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. This agent must be used in the manner and frequency recommended for the particular dust by the manufacturer of the dust suppression agent. Other equally effective dust suppression agents may be used upon prior approval by the department. For purposes of this paragraph, used, spent, or other waste oil is not considered a dust suppression agent.

d. Rather than meet the no visible emission requirements of subdivision a of this subsection, use an alternative emission control method that has received prior approval by the department and administrator of the United States environmental protection agency.

e. For all asbestos-containing waste material received, the owner or operator of the active waste disposal site shall:

(1) Maintain waste shipment records which include the following information:

(a) The name, address, and telephone number of the waste generator.

(b) The name, address, and telephone number of the transporters.

(c) The quantity of the asbestos-containing material in cubic yards.

(d) The presence of improperly enclosed or uncovered wastes or any asbestos-containing waste material not sealed in leaktight containers. Report in writing to this department by the following working day, the

presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.

(e) The date of the receipt.

(2) As soon as possible and no longer than thirty days after receipt of the waste send a copy of the signed waste shipment record to the waste generator.

(3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within fifteen days after receiving the waste, immediately report in writing to this department. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.

(4) Retain a copy of all records and reports required by this subdivision for at least two years.

f. Maintain until closure, records of the location, depth and area and quantity in cubic yards of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.

g. Upon closure, comply with all the provisions of subsection 12.

h. Submit to this department, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

i. Furnish upon request and make available during normal business for inspection by this department, all records required under this section.

j. Comply with subdivision d of subsection 12 if it becomes necessary to excavate or otherwise disturb asbestos-containing waste material that has been previously covered.

16. **Asbestos abatement licensing and certification.** No public employees or employees of asbestos contractors shall engage in any asbestos abatement activity or provide asbestos abatement project monitoring unless they are certified with the department as provided in this subsection. No person shall engage in any asbestos abatement activity in a public or commercial building unless the person is certified with the department as provided in this subsection. Certification will be for a period of one year from the completion date of the initial training course or the last refresher course in the appropriate discipline. All asbestos contractors and firms who provide asbestos abatement or asbestos abatement project monitoring services, must be licensed with this department, as provided in this subsection, prior to beginning asbestos abatement or asbestos abatement project monitoring activities. At least one person having completed the requirements for supervisor certification of subdivision b of this subsection is required to be at the worksite at all times while work is in progress, if the work involves repair, removal, encapsulation, enclosure, or handling of regulated asbestos-containing material if the work is being conducted by an asbestos contractor or public employees. At least one onsite individual having completed the supervisor training requirement of subdivision b of this subsection is required to be present if the

activity is regulated by subsection 6 and the work is being conducted by employees of the owner.

a. Asbestos workers. All asbestos workers employed by asbestos abatement contractors and all public employees and all other asbestos workers in public and commercial buildings engaged in the repair, removal, enclosure, encapsulation, or handling of regulated asbestos-containing material, must obtain certification as outlined in all paragraphs of this subdivision except as provided in subdivision h.

(1) Application. Any applicant desiring certification as an asbestos worker shall make an application to the department on forms supplied by the department. Each application shall be accompanied by a nonrefundable fee of fifty dollars except as provided in subdivision g. This fee includes the processing of the initial examination specified in paragraph 3 of this subdivision.

(2) Initial training. Any applicant desiring certification as an asbestos worker shall complete the initial training requirements for asbestos worker accreditation under title 40, Code of Federal Regulations, part 763, appendix C to subpart E - environmental protection agency model contractor accreditation plan as amended February 3, 1994, by attending and successfully completing a training course designed for asbestos workers. The training course must have received approval from the environmental protection agency or the department.

(3) Examination. Any applicant for certification shall pass a written examination administered by the department. The department may accept proof of successful completion of an examination administered by an environmental protection agency or department approved training course provider. The examination and the results of the examination must be available to the department upon request. Any applicant who fails to obtain a minimum seventy percent passing score on the examination shall be eligible to take a subsequent examination no earlier than one week following the previous examination. A twenty-five dollar fee is required for each examination. No more than three examinations may be given before requiring attendance of another initial training course. Information concerning the testing arrangements can be obtained from the department.

(4) Refresher training. Any asbestos worker who has received initial training and has established full certification with the department, and who wishes to maintain continuous certification, shall complete a refresher training course as required by the model contractor accreditation plan as amended February 3, 1994, within one year of completing the initial training course. The course content must include a review of the changes in federal and state regulations, a discussion of the developments in state-of-the-art procedures and equipment as well as an overview of key aspects of the initial training course. Thereafter, the asbestos worker shall complete a refresher course within one year of the last refresher course.

(5) Certification renewal. Any asbestos worker who desires to renew their certification must have attended a refresher training course within twelve months prior to submittal of the renewal application. The renewal application shall include proof of attendance at such course and a recertification fee of

fifty dollars. Certification is current for a period of twelve months from the date of the training course. If an asbestos worker does not satisfy the refresher training requirements of this subdivision within two years of the date of the initial training course or of the last refresher training course, then the individual shall complete the initial training requirements provided in paragraph 2 of this subdivision to reestablish full certification.

(6) The certification card issued by the department must be available at the worksite for each asbestos worker.

b. Other asbestos disciplines. Any individual, except asbestos workers, acting as or acting on behalf of an asbestos contractor or as a public employee who performs an asbestos abatement service or any individual who performs asbestos abatement project monitoring on behalf of a contracting firm or as a public employee or any other individual who performs asbestos abatement in a public or commercial building must obtain certification as outlined in all paragraphs of this subdivision. This certification requirement applies to asbestos abatement supervisors, asbestos inspectors, asbestos management planners, asbestos abatement project designers, and asbestos abatement project monitors except as provided in subdivision h.

(1) Application. Any person desiring certification in the disciplines of asbestos inspector, asbestos management planner, asbestos abatement project designer, asbestos abatement project monitor, and asbestos abatement supervisor shall make an application to the department on forms supplied by the department. Each application shall be accompanied by a nonrefundable fee of fifty dollars for each discipline within which the applicant is seeking certification except as provided in subdivision g. This fee includes the processing of the initial examination specified in paragraph 3 of this subdivision.

(2) The initial training requirements are as follows:

(a) Any applicant desiring certification as an asbestos inspector, asbestos management planner, asbestos abatement project designer, or asbestos abatement supervisor or any individual required to meet the training requirements of paragraph 8 of subdivision c of subsection 6 shall complete the initial training requirements set forth in title 40, Code of Federal Regulations, part 763, appendix C to subpart E - environmental protection agency model contractor accreditation plan as amended February 3, 1994, by attending and successfully completing a training course in the appropriate discipline. The training course must have received approval in the respective discipline from the environmental protection agency or the department.

(b) Asbestos abatement project monitors must have a valid state certification as asbestos abatement supervisor or asbestos abatement project designer and shall have completed a NIOSH 582 or equivalent air sampling course of not less than four days in length.

(3) Examination. Any applicant for certification in a specific discipline except asbestos abatement project monitor shall pass a written examination

administered by the department for that discipline. The department may accept proof of successful completion of an examination administered by an environmental protection agency or department approved training course provider. The examination and the results of the examination must be available to the department upon request. Any applicant who fails to obtain a minimum seventy percent passing score on the examination shall be eligible to take a subsequent examination no earlier than one week following the previous examination. A twenty-five dollar fee is required for each examination. No more than three examinations shall be given before requiring attendance of another initial training course.

(4) Refresher training. Any asbestos abatement supervisor, asbestos inspector, asbestos management planner, or asbestos abatement project designer who has received initial training and has established full certification with the department, and who wishes to maintain continuous certification, or any individual who must meet the training requirements of paragraph 8 of subdivision c of subsection 6 shall complete a refresher training course as required by the model contractor accreditation plan as amended February 3, 1994, within one year of completing the initial training course. The course content must include a review of the changes in the federal and state regulations, a discussion of the developments in state-of-the-art procedures and equipment as well as an overview of key aspects of the initial training course. Thereafter, these persons shall complete a refresher course designed for the respective disciplines within one year of the last refresher course.

(5) Certification renewal. Any asbestos abatement supervisor, asbestos inspector, asbestos management planner, asbestos abatement project designer, or asbestos abatement project monitor who desires to renew the person's certification must have attended a refresher training course in the appropriate discipline within twelve months prior to submittal of the renewal application. The renewal application shall include proof of attendance at such a course and a recertification fee of fifty dollars per discipline. Certification is current for a period of twelve months from the date of the training course. If an individual does not satisfy the refresher training requirements of this subdivision in their respective discipline within two years of the date of the initial training or of the last refresher training, then that individual shall complete the initial training requirements provided in paragraph 2 of this subdivision to reestablish full certification. Refresher training of the air sampling course for project monitors is not required.

(6) The certification card issued by the department must be available at the worksite.

c. Asbestos contractor license. Each contractor who performs asbestos abatement services or performs asbestos abatement project monitoring services in the state shall obtain an asbestos contractor license except as provided in subdivision h.

(1) Submit an application to the department on forms supplied by the department. An application shall be accompanied by a nonrefundable fee of one hundred fifty dollars.

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- (2) The license fee will cover the period from January first through December thirty-first of each year unless the license is suspended, revoked, or denied as specified in subdivision f. The fee shall be one hundred fifty dollars regardless of the application date. Following the initial submittal, the renewal fee shall be due and payable by January thirtieth of the following year.
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- (3) A contractor seeking an asbestos contractor license must have completed the appropriate training and certification requirements in subdivision b of this subsection. The contractor may designate an employee who has completed this requirement to serve as the contractor's agent for the purposes of obtaining an asbestos contractor license.
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- (4) Asbestos contractors who provide multiple services are not required to pay additional license fees.
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- (5) All certifiable services offered by an asbestos contractor must be performed by persons certified in accordance with subdivisions a and b of this subsection.
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- (6) A copy of the asbestos contractor license shall be made available at the worksite.
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- (7) This license does not exempt, supersede, or replace any other state or local licensing or permitting requirements.
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- d. Approved initial and refresher training courses. The department will maintain and provide a listing of approved initial and refresher training courses. Applicants seeking approval of courses, other than those present on the department list, must submit information on the course content to the department. The course content must satisfy the minimum requirements of the model contractor accreditation plan as amended February 3, 1994. The department will advise the applicant whether the course is approved within thirty days of receipt of the necessary information. Training course providers will be required to meet all applicable requirements contained in title 40, Code of Federal Regulations, part 763, appendix C to subpart E as amended February 3, 1994.
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- e. Reciprocity. Each applicant for asbestos worker or asbestos contractor certification who is licensed or certified for asbestos abatement in another state may petition the department for certification without written examination. The department shall evaluate the requirements in such other states and shall issue the certification without examination if the department determines that the requirements in such other states are at least as stringent as the requirements for certification in North Dakota. Each application for certification pursuant to this subdivision shall submit an application accompanied by a nonrefundable fee of fifty dollars.
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- f. Suspension, revocation, or denial. An asbestos certification or license may be suspended, revoked, or denied if:
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- (1) Violations of the requirements of this section are noted;
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- (2) Another state has revoked, suspended, or denied a license or certification for violations of applicable standards;

(3) An incomplete application is filed; or

(4) The required fee is not submitted.

g. Public employees will not be required to pay the fifty dollar certification or recertification fees.

h. Any individual or asbestos contractor engaged in repair, removal, enclosure, or encapsulation activities involving less than or equal to three square feet [0.28 square meters] or three linear feet [0.91 meters] of asbestos-containing materials, are exempt from the certification and licensing requirements of this subsection.

i. Upon written request, the department, at its discretion, may review training course material and conduct an audit of a training course to determine if the course and examination meet the training requirements of title 40, Code of Federal Regulations, part 763, appendix C to subpart E - environmental protection agency model contractor accreditation plan as amended February 3, 1994. Under the authority granted to this department by the environmental protection agency courses that this department determine to meet the model contractor accreditation plan shall be listed in the federal register list of approved courses.

(1) Training courses seeking department approval shall submit the material necessary for the department to conduct the review, including the submittal requirements listed in title 40, Code of Federal Regulations, part 763, appendix C, subpart E, model contractor accreditation plan as amended February 3, 1994.

(2) The department must be provided access, without cost, to any asbestos course conducted in this state to determine if the course meets the requirement of the environmental protection agency model contractor accreditation plan as amended February 3, 1994. Following such an audit, the department may rescind approval or refuse to accept as adequate any course determined not to meet the training requirements of the environmental protection agency model contractor accreditation plan.

(3) Any training provider requesting a review of the provider's course for approval by this department shall submit a filing fee of one hundred fifty dollars plus an application processing fee. The application processing fee will be based on the actual processing costs, including time spent by this department to conduct the course review and course audit, and any travel and lodging expenses the department incurs conducting these items. Following the course review and audit, and after making a determination on the accreditation status of the course, a statement will be sent to the applicant listing the remaining application processing costs. The statement must be sent within fifteen months of the submittal of the initial filing fee.

17. Standard for operations that convert asbestos-containing waste material into nonasbestos (asbestos-free) material. Each owner or operator of an operation that converts regulated asbestos-containing material and asbestos-containing waste material into nonasbestos (asbestos-free) material shall:

a. Obtain the prior written approval of this department and the administrator of the United States environmental protection agency to construct the facility. To obtain

approval, the owner or operator shall provide the department and the administrator of the United States environmental protection agency with the following information:

(1) Application to construct pursuant to chapter 33.1-15-14.

(2) In addition to the information requirements of chapter 33.1-15-14, provide a:

(a) Description of the waste feed handling and temporary storage.

(b) Description of process operating conditions.

(c) Description of the handling and temporary storage of the end products.

(d) Description of the protocol to be followed when analyzing output materials by transmission electron microscopy.

(3) Performance test protocol, including provisions for obtaining information required under subdivision b of this subsection.

(4) The department may require that a demonstration of the process be performed prior to approval of the application to construct.

b. Conduct a startup performance test. Test results must include:

(1) A detailed description of the types and quantities of nonasbestos material, regulated asbestos-containing material, and asbestos-containing waste material processed (e.g., asbestos cement products, friable asbestos insulation, plaster, wood, plastic, wire, etc.). Test feed is to include the full range of materials that will be encountered in actual operation of the process.

(2) Results of analyses, using polarized light microscopy, that document the asbestos content of the wastes processed.

(3) Results of analyses using transmission electron microscopy, that document that the output materials are free of asbestos. Samples for analysis are to be collected as eight-hour composite samples (one 200-gram [seven-ounce] sample per hour), beginning with the initial introduction of regulated asbestos-containing material or asbestos-containing waste material and continuing until the end of the performance test.

(4) A description of operating parameters, such as temperature and residence times, defining the full range over which the process is expected to operate to produce nonasbestos (asbestos-free) materials. Specify the limits for each operating parameter within which the process will produce nonasbestos (asbestos-free) materials.

(5) The length of the test.

c. During the initial ninety days of operation:

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- (1) Continuously monitor and log the operating parameters identified during startup performance tests that are intended to ensure the production of nonasbestos (asbestos-free) output material.

 - (2) Monitor input materials to ensure that they are consistent with the test feed materials described during startup performance tests in paragraph 1 of this subdivision.

 - (3) Collect and analyze samples taken as ten-day composite samples (one 200-gram [seven-ounce] sample collected every eight hours of operation) of all output materials for the presence of asbestos. Composite samples may be for fewer than ten days. Transmission electron microscopy must be used to analyze the output materials for the presence of asbestos. During the initial ninety-day period, all output materials must be stored onsite until analysis shows the material to be asbestos-free or be disposed of as asbestos-containing waste material according to subsection 11.
- d. After the initial ninety days of operation:
- (1) Continuously monitor and record the operating parameters identified during startup performance testing and any subsequent performance testing. Any output produced during a period of deviation from the range of operating conditions established to ensure the production of nonasbestos (asbestos-free) output material shall be:
 - (a) Disposed of as asbestos-containing waste material according to subsection 11;
 - (b) Recycled as waste feed during process operations within the established range of operating conditions; or
 - (c) Stored temporarily onsite in a leaktight container until analyzed for asbestos content. Any product material that is not asbestos-free shall either be disposed of as asbestos-containing waste material or recycled as waste feed to the process.

 - (2) Collect and analyze monthly composite samples (one 200-gram [seven-ounce] sample collected every eight hours of operation) of the output material. Transmission electron microscopy must be used to analyze the output material for the presence of asbestos.
- e. Discharge no visible emissions to the outside air from any part of the operation or use the methods specified by subsection 13 to clean emissions containing particulate asbestos material before they escape to or are vented to the outside air.
- f. Maintain records onsite and include the following information:
- (1) Results of startup performance testing and all subsequent performance testing, including operating parameters, feed characteristics, and analyses of output materials.

- (2) Results of the composite analysis required during the initial ninety days of operation under subdivision c of this subsection.
 - (3) Results of the monthly composite analysis required under subdivision d of this subsection.
 - (4) Results of continuous monitoring and logs of process operating parameters required under subdivisions c and d of this subsection.
 - (5) Information on waste shipments received as required in subdivision e of subsection 15.
 - (6) For output materials when no analyses were performed to determine the presence of asbestos, record the name and location of the purchaser or disposal site to which output materials were sold or deposited and the date of sale or disposal.
 - (7) Retain records required by this subdivision for at least two years.
- g. Submit the following reports to the department:
- (1) A report for each analysis of product composite samples performed during the initial ninety days of operation.
 - (2) A quarterly report, including the following information concerning activities during each consecutive three-month period:
 - (a) Results of analyses of monthly product composite samples.
 - (b) A description of any deviation from the operating parameters established during performance testing, the duration of the deviation, and steps taken to correct the deviation.
 - (c) Disposition of any product produced during a period of deviation, including whether it was recycled, disposed of as asbestos-containing waste material, or stored temporarily onsite until analyzed for asbestos content.
 - (d) The information on waste disposal activities as required in subdivision f of subsection 15.
- h. Nonasbestos (asbestos-free) output material is not subject to any of the provisions of this section. Output material in which asbestos is detected, or output materials produced when the operating parameters deviated from those established during the startup performance testing, unless shown by transmission electron microscopy analysis to be asbestos-free shall be considered to be asbestos-containing waste and must be handled and disposed of in accordance with subsections 11 and 15 or reprocessed while all of the established operating parameters are being met.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-25-05; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-25-05; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-14
DESIGNATED AIR CONTAMINANT SOURCES, PERMIT TO CONSTRUCT, MINOR
SOURCE PERMIT TO OPERATE, TITLE V PERMIT TO OPERATE

Section

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33.1-15-14-01. Designated air contaminant sources.

Pursuant to subsection 1 of North Dakota Century Code section 23.1-06-08, stationary sources within the following source categories are designated as air contaminant sources capable of causing or contributing to air pollution, either directly or indirectly.

1. The following chemical process facilities:

a. Adipic acid.

b. Ammonia.

c. Ammonium nitrate.

d. Carbon black.

e. Charcoal.

f. Chlorine.

g. Chlor-alkali manufacturing.

h. Detergent and soap.

i. Explosives (trinitrotoluene and nitrocellulose).

j. Hydrochloric acid.

k. Hydrofluoric acid.

l. Nitric acid.

m. Paint and varnish manufacturing.

n. Phosphoric acid.

o. Phthalic anhydride.

p. Plastics manufacturing.

- q. Printing ink manufacturing.
- r. Sodium carbonate.
- s. Sulfur production and recovery.
- t. Sulfuric acid.
- u. Synthetic fibers.
- v. Synthetic rubber.
- w. Terephthalic acid.
- x. Alcohol.
- y. Cresylic acids.
- z. Phenol.
- aa. Polymer manufacturing and coating operations.

2. The following food and agricultural facilities:

- a. Agricultural drying and dehydrating operations.
- b. Ammonium nitrate.
- c. Cheese whey drying and processing.
- d. Coffee roasting.
- e. Cotton ginning.
- f. Feed, grain, and seed handling and processing.
- g. Fermentation processes.
- h. Fertilizers.
- i. Fishmeal processing.
- j. Meat smokehouses.
- k. Orchard heaters.
- l. Potato processing.
- m. Rendering plants.
- n. Starch manufacturing.
- o. Sugarbeet processing.

3. The following metallurgical facilities:

- a. Primary metals facilities:

- (1) Aluminum ore reduction.
- (2) Copper smelters.
- (3) Ferroalloy production.
- (4) Iron and steel mills.
- (5) Lead smelters.
- (6) Metallurgical coke manufacturing.
- (7) Zinc.

 b. Secondary metals facilities:

- (1) Aluminum operations.
- (2) Brass and bronze smelting.
- (3) Ferroalloys.
- (4) Ferrous foundries.
- (5) Gray iron foundries.
- (6) Lead smelting.
- (7) Magnesium smelting.
- (8) Nonferrous foundries.
- (9) Steel foundries.
- (10) Zinc processes.

 c. Electrolytic plating operations.

4. The following mineral products facilities:

- a. Asphalt roofing.
- b. Asphaltic concrete plants.
- c. Bricks and related clay refractories.
- d. Calcium carbide.
- e. Ceramic and clay processes.
- f. Clay and fly ash sintering.
- g. Coal cleaning.
- h. Coal drying.
- i. Coal mining.

- j. Coal handling and processing.
 - k. Concrete batching.
 - l. Fiberglass manufacturing.
 - m. Frit manufacturing.
 - n. Glass manufacturing.
 - o. Gypsum manufacturing.
 - p. Leonardite mining, drying, and processing.
 - q. Lime manufacturing.
 - r. Mineral wool manufacturing.
 - s. Paperboard manufacturing.
 - t. Perlite manufacturing.
 - u. Phosphate rock preparation.
 - v. Portland cement manufacturing, bulk handling, and storage.
 - w. Rock, stone, gravel, and sand quarrying and processing.
 - x. Uranium mining, milling, and enrichment.
 - y. Calciners and dryers.
5. The following energy and fuel facilities:
- a. Coal gasification.
 - b. Coal liquefaction.
 - c. Crude oil and natural gas production.
 - d. Fossil fuel steam electric plants.
 - e. Fuel conversion plants.
 - f. Natural gas processing.
 - g. Petroleum refining and petrochemical operations.
 - h. Petroleum storage (storage tanks and bulk terminals).
6. The following wood processing facilities:
- a. Plywood veneer and layout operations.
 - b. Pulpboard manufacturing.
 - c. Wood pulping.

- d. Sawmills.
 - e. Wood products manufacturing.
7. The following waste management units or facilities:
- a. Afterburners.
 - b. Automobile body incinerators.
 - c. Conical burners.
 - d. Flares.
 - e. Gaseous and liquid organic compounds incinerators.
 - f. Industrial waste incinerators.
 - g. Open burning.
 - h. Open pit incinerators.
 - i. Infectious waste incinerators.
 - j. Refuse incinerators.
 - k. Salvage incinerators.
 - l. Sewage sludge incinerators.
 - m. Wood waste incinerators
 - n. Municipal waste combustors.
8. The following miscellaneous facilities:
- a. Drycleaning and laundry operations.
 - b. Fuel burning equipment.
 - c. Internal combustion engines.
 - d. Surface coating operations.
 - e. Wastewater treatment plants.
 - f. Water cooling towers and water cooling ponds.
 - g. Stationary gas turbines.
 - h. Lead acid battery manufacturing.
 - i. Hydrocarbon contaminated soil remediation projects.
9. Any source for which an applicable federal standard of performance [40 CFR 60] has been adopted in chapter 33.1-15-12.

10. Any source for which an applicable national emission standard for hazardous air pollutants [40 CFR 61] has been adopted in chapter 33.1-15-13.
11. Any source which is subject to review under federal prevention of significant deterioration of air quality regulations [40 CFR 51.166].
12. Any source which is determined by the department to cause or contribute to a violation of any state ambient air quality standard or violates the other provisions of chapter 33.1-15-02.
13. Any source subject to title V permitting requirements in section 33.1-15-14-06.
14. Any major source to which a national emission standard for hazardous air pollutants for source categories [40 CFR 63] would apply.
15. Other stationary sources subject to a standard or requirement under the Federal Clean Air Act as amended.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-14-01.1. Definitions.

For the purposes of this chapter:

1. "Complete" means, in reference to an application for a permit, that the application contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the department from requesting or accepting any additional information.
2. "Construction, installation, or establishment" means:
 - a. For sources subject to a standard or requirement under chapters 33.1-15-13, 33.1-15-15 (excluding increment consumption by nonmajor sources), and 33.1-15-22, it shall have the meaning given for construction in each of the respective chapters.
 - b. For all other sources it means the placement or erection, including fabrication, demolition, or modification, of an air contaminant emissions unit and any equipment, process, or structure that will be used to reduce, physically or chemically change, or transmit to the atmosphere any air contaminant. This does not include the building that houses the source, site work, foundations, or other equipment which does not affect the amount, ambient concentration, or type of air contaminants that are emitted. With respect to a physical change or a change in the method of operation it means those onsite activities which will affect an existing emissions unit or establishment of a new unit that emits to the atmosphere.
3. "Emissions unit" has the meaning given to it in section 33.1-15-14-06.
4. "Minor source" means any designated air contaminant source under section 33.1-15-14-01 which is not required to obtain a title V permit to operate under section 33.1-15-14-06.

5. "Potential to emit" has the meaning given to it in section 33.1-15-14-06.

6. "Stationary source" has the meaning given to it in section 33.1-15-14-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-14-02. Permit to construct.

1. Permit to construct required.

a. No construction, installation, or establishment of a new stationary source within a source category designated in section 33.1-15-14-01 may be commenced unless the owner or operator thereof shall file an application for, and receive, a permit to construct in accordance with this chapter.

b. The initiation of activities that are exempt from the definition of construction, installation, or establishment in section 33.1-15-14-01.1, prior to obtaining a permit to construct, are at the owner's or operator's own risk. These activities have no impact on the department's decision to issue a permit to construct. The initiation or completion of such activities conveys no rights to a permit to construct under this section.

c. General permits. The department may issue a general permit to construct covering numerous similar sources which are not subject to permitting requirements under chapter 33.1-15-13 or 33.1-15-15 or subpart B of section 33.1-15-22-03. Any general permit shall comply with all requirements applicable to other permits to construct and shall identify criteria by which sources may qualify for the general permit. A proposed general permit, any changes to a general permit, and any renewal of a general permit is subject to public comment. The public comment procedures under subsection 6 of section 33.1-15-14-02 shall be used. To sources that qualify, the department shall grant the conditions and terms of the general permit. Sources that would qualify for a general permit must apply to the department for coverage under the terms of the general permit or apply for an individual permit to construct. Without repeating the public participation procedures under subsection 6 of section 33.1-15-14-02, the department may grant a source's request for authorization to construct under the general permit.

2. Application for permit to construct.

a. Application for a permit to construct a new installation or source must be made by the owner or operator thereof on forms furnished by the department.

b. A separate application is required for each new installation or source subject to this chapter.

c. Each application must be signed by the applicant, which signature shall constitute an agreement that the applicant will assume responsibility for the construction or operation of the new installation or source in accordance with this article and will notify the department, in writing, of the startup of operation of such source.

3. Alterations to source.

a. The addition to or enlargement of or replacement of or alteration in any stationary source, already existing, which is undertaken pursuant to an approved compliance schedule for the reduction of emissions therefrom, shall be exempt from the requirements of this section.

b. Any physical change in, or change in the method of operation of, a stationary source already existing which increases or may increase the emission rate or increase the ambient concentration by an amount greater than that specified in subdivision a of subsection 5 of any pollutant for which an ambient air quality standard has been promulgated under this article or which results in the emission of any such pollutant not previously emitted must be considered to be construction, installation, or establishment of a new source, except that:

(1) Routine maintenance, repair, and replacement may not be considered a physical change.

(2) The following may not be considered a change in the method of operation:

(a) An increase in the production rate, if such increase does not exceed the operating design capacity of the source and it is not limited by a permit condition.

(b) An increase in the hours of operation if it is not limited by a permit condition.

(c) Changes from one operating scenario to another provided the alternative operating scenarios are identified and approved in a permit to operate.

(d) Trading of emissions within a facility provided:

[1] These trades have been identified and approved in a permit to operate; and

[2] The total facility emissions do not exceed the facility emissions cap established in the permit to operate.

(e) Trading and utilizing acid rain allowances provided compliance is maintained with all other applicable requirements.

c. Any owner or operator of a source who requests an increase in the allowable sulfur dioxide emission rate for the source pursuant to section 33.1-15-02-07 shall demonstrate through a dispersion modeling analysis that the revised allowable emissions will not cause or contribute to a violation of the national ambient air quality standards for sulfur oxides (sulfur dioxide) or the prevention of significant deterioration increments for sulfur dioxide. The owner or operator shall also demonstrate that the revised allowable emission rate will not violate any other requirement of this article or the Federal Clean Air Act. Requests for emission limit changes shall be subject to review by the public and the environmental protection agency in accordance with subsection 6.

4. **Submission of plans - Deficiencies in application.** As part of an application for a permit to construct, the department may require the submission of plans, specifications, siting information, emission information, descriptions and drawings showing the design of the installation or source, the manner in which it will be operated and controlled, the emissions expected from it, and the effects on ambient air quality. Any additional information, plans, specifications, evidence, or documentation that the department may require must be furnished upon request. Within twenty days of the receipt of the application, the department shall advise the owner or operator of the proposed source of any deficiencies in the application. In the event of a deficiency, the date of receipt of the application is the date upon which all requested information is received.

a. Determination of the effects on ambient air quality as may be required under this section must be based on the applicable requirements specified in the "Guideline on Air Quality Models (Revised)" (United States environmental protection agency, office of air quality planning and standards, Research Triangle Park, North Carolina 27711) as supplemented by the "North Dakota Guideline for Air Quality Modeling Analyses" (North Dakota state department of health, division of air quality). These documents are incorporated by reference.

b. When an air quality impact model specified in the documents incorporated by reference in subdivision a is inappropriate, the model may be modified or another model substituted provided:

(1) Any modified or nonguideline model must be subject to notice and opportunity for public comment under subsection 6.

(2) The applicant must provide to the department adequate information to evaluate the applicability of the modified or nonguideline model. Such information must include, but is not limited to, methods like those outlined in the "Interim Procedures for Evaluating Air Quality Models (Revised)" (United States environmental protection agency, office of air quality planning and standards, Research Triangle Park, North Carolina 27709).

(3) Written approval from the department must be obtained for any modification or substitution.

(4) Written approval from the United States environmental protection agency must be obtained for any modification or substitution prior to the granting of a permit under this chapter.

5. **Review of application - Standard for granting permits to construct.** The department shall review any plans, specifications, and other information submitted in application for a permit to construct and from such review shall, within ninety days of the receipt of the completed application, make the following preliminary determinations:

a. Whether the proposed project will be in accord with this article, including whether the operation of any new stationary source at the proposed location will cause or contribute to a violation of any applicable ambient air quality standard. A new stationary source will be considered to cause or contribute to a violation of an ambient air quality standard when such source would, at a minimum, exceed the

following significance levels at any locality that does not or would not meet the applicable ambient standard:

<u>Contaminant</u>	<u>Averaging Time (hours)</u>				
	<u>Annual</u> ($\mu\text{g}/\text{m}^3$)	<u>24</u> ($\mu\text{g}/\text{m}^3$)	<u>8</u> ($\mu\text{g}/\text{m}^3$)	<u>3</u> ($\mu\text{g}/\text{m}^3$)	<u>1</u> ($\mu\text{g}/\text{m}^3$)
<u>SO₂</u>	<u>1.0</u>	<u>5</u>		<u>25</u>	<u>7.8</u>
<u>PM₁₀</u>		<u>5</u>			
<u>NO₂</u>	<u>1.0</u>				<u>7.5</u>
<u>CO</u>			<u>500</u>		<u>2000</u>
<u>PM_{2.5}</u>	<u>0.3</u>	<u>1.2</u>			

- b. Whether the proposed project will provide all necessary and reasonable methods of emission control. Whenever a standard of performance is applicable to the source, compliance with this criterion will require provision for emission control which will, at least, satisfy such standards.

6. Public participation - Final action on application.

- a. The following source categories are subject to the public participation procedures under this subsection:

(1) Those affected facilities designated under chapter 33.1-15-13.

(2) New sources that will be required to obtain a permit to operate under section 33.1-15-14-06.

(3) Modifications to an existing facility which will increase the potential to emit from the facility by the following amounts:

(a) One hundred tons [90.72 metric tons] per year or more of particulate matter, sulfur dioxide, nitrogen oxides, hydrogen sulfide, carbon monoxide, or volatile organic compounds;

(b) Ten tons [9.07 metric tons] per year or more of any contaminant listed under section 112(b) of the Federal Clean Air Act; or

(c) Twenty-five tons [22.68 metric tons] per year or more of any combination of contaminants listed under section 112(b) of the Federal Clean Air Act.

(4) Sources which the department has determined to have a major impact on air quality.

(5) Those for which a request for a public comment period has been received from the public.

(6) Sources for which a significant degree of public interest exists regarding air quality issues.

(7) Those sources which request a federally enforceable permit which limits their potential to emit.

b. With respect to the permit to construct application, the department shall:

(1) Within ninety days of receipt of a complete application, make a preliminary determination concerning issuance of a permit to construct.

(2) Within ninety days of the receipt of the complete application, make available in at least one location in the county or counties in which the proposed project is to be located or on the department's website, a copy of its preliminary determinations and copies of or a summary of the information considered in making such preliminary determinations.

(3) Publish notice to the public by prominent advertisement, within ninety days of the receipt of the complete application, in the region affected, of the opportunity for written comment on the preliminary determinations. The public notice must include the proposed location of the source.

(4) Within ninety days of the receipt of the complete application, deliver a copy of the notice to the applicant and to officials and agencies having cognizance over the locations where the source will be situated as follows: the chief executive of the city and county; any comprehensive regional land use planning agency; and any state, federal land manager, or Indian governing body whose lands will be significantly affected by the source's emissions.

(5) Within ninety days of receipt of a complete application, provide a copy of the proposed permit and all information considered in the development of the permit and the public notice to the regional administrator of the United States environmental protection agency.

(6) Allow thirty days for public comment.

(7) Consider all public comments properly received, in making the final decision on the application.

(8) Allow the applicant to submit written responses to public comments received by the department. The applicant's responses must be submitted to the department within twenty days of the close of the public comment period.

(9) Take final action on the application within thirty days of the applicant's response to the public comments.

(10) Provide a copy of the final permit, if issued, to the applicant, the regional administrator of the United States environmental protection agency, and anyone who requests a copy.

c. For those sources subject to the requirements of chapter 33.1-15-15, the public participation procedures under section 33.1-15-15-01.2 shall be followed.

7. **Denial of permit to construct.** If, after review of all information received, including public comment with respect to any proposed project, the department makes the determination of any one of subdivision a or b of subsection 5 in the negative, it shall

deny the permit and notify the applicant, in writing, of the denial to issue a permit to construct.

If a permit to construct is denied, the construction, installation, or establishment of the new stationary source shall be unlawful. No permit to construct or modify may be granted if such construction, or modification, or installation, will result in a violation of this article.

8. **Issuance of permit to construct.** If, after review of all information received, including public comment with respect to any proposed project, the department makes the determination of subdivision a or b of subsection 5 in the affirmative, the department shall issue a permit to construct. The permit may provide for conditions of operation as provided in subsection 9.

9. **Permit to construct - Conditions.** The department may impose any reasonable conditions upon a permit to construct, including conditions concerning:

a. Sampling, testing, and monitoring of the facilities or the ambient air or both.

b. Trial operation and performance testing.

c. Prevention and abatement of nuisance conditions caused by operation of the facility.

d. Recordkeeping and reporting.

e. Compliance with applicable rules and regulations in accordance with a compliance schedule.

f. Limitation on hours of operation, production rate, processing rate, or fuel usage when necessary to assure compliance with this article.

The violation of any conditions so imposed may result in revocation or suspension of the permit or other appropriate enforcement action.

10. **Scope.**

a. The issuance of a permit to construct for any source does not affect the responsibility of an owner or operator to comply with applicable portions of a control strategy affecting the source.

b. A permit to construct shall become invalid if construction is not commenced within eighteen months after receipt of such permit, if construction is discontinued for a period of eighteen months or more; or if construction is not completed within a reasonable time. The department may extend the eighteen-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen months of the projected and approved commencement date. In cases of major construction projects involving long lead times and substantial financial commitments, the department may provide by a condition to the permit a time period greater than eighteen months when such time extension is supported by sufficient documentation by the applicant.

11. **Transfer of permit to construct.** To ensure the responsible owners or operators, or both, are identified, the holder of a permit to construct may not transfer such permit without prior approval of the department.

12. **[Reserved]**

13. **Exemptions.** A permit to construct is not required for the following stationary sources provided there is no federal requirement for a permit or approval for construction or operation.

a. Maintenance, structural changes, or minor repair of process equipment, fuel burning equipment, control equipment, or incinerators which do not change capacity of such process equipment, fuel burning equipment, control equipment, or incinerators and which do not involve any change in the quality, nature, or quantity of emissions therefrom.

b. Fossil fuel burning equipment, other than smokehouse generators, which meet all of the following criteria:

(1) The heat input per unit does not exceed ten million British thermal units per hour.

(2) The total aggregate heat input from all equipment does not exceed ten million British thermal units per hour.

(3) The actual emissions, as defined in chapter 33.1-15-15, from all equipment do not exceed twenty-five tons [22.67 metric tons] per year of any air contaminant and the potential to emit any air contaminant for which an ambient air quality standard has been promulgated in chapter 33.1-15-02 is less than one hundred tons [90.68 metric tons] per year.

c. (1) Any single internal combustion engine with less than five hundred brake horsepower, or multiple engines with a combined brake horsepower rating less than five hundred brake horsepower.

(2) Any single internal combustion engine with a maximum rating of less than one thousand brake horsepower, or multiple engines with a combined brake horsepower rating of less than one thousand brake horsepower, and which operates a total of five hundred hours or less in a rolling twelve-month period.

(3) Any internal combustion engine, or multiple engines at the same facility, with a total combined actual emission rate of five tons [4.54 metric tons] per year or less of any air contaminant for which an ambient air quality standard has been promulgated in section 33.1-15-02-04.

(4) The exemptions listed in paragraphs 1, 2, and 3 do not apply to engines that are a utility unit as defined in section 33.1-15-21-08.1.

d. Bench scale laboratory equipment used exclusively for chemical or physical analysis or experimentation.

e. Portable brazing, soldering, or welding equipment.

f. The following equipment:

- (1) Comfort air-conditioners or comfort ventilating systems which are not designed and not intended to be used to remove emissions generated by or released from specific units or equipment.
- (2) Water cooling towers and water cooling ponds unless used for evaporative cooling of process water, or for evaporative cooling of water from barometric jets or barometric condensers or used in conjunction with an installation requiring a permit.
- (3) Equipment used exclusively for steam cleaning.
- (4) Porcelain enameling furnaces or porcelain enameling drying ovens.
- (5) Unheated solvent dispensing containers or unheated solvent rinsing containers of sixty gallons [227.12 liters] capacity or less.
- (6) Equipment used for hydraulic or hydrostatic testing.

g. The following equipment or any exhaust system or collector serving exclusively such equipment:

- (1) Blast cleaning equipment using a suspension of abrasive in water.
- (2) Bakery ovens if the products are edible and intended for human consumption.
- (3) Kilns for firing ceramic ware, heated exclusively by gaseous fuels, singly or in combinations, and electricity.
- (4) Confection cookers if the products are edible and intended for human consumption.
- (5) Drop hammers or hydraulic presses for forging or metalworking.
- (6) Diecasting machines.
- (7) Photographic process equipment through which an image is reproduced upon material through the use of sensitized radiant energy.
- (8) Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products, which is located within a facility that does not vent to the outside air.
- (9) Equipment for surface preparation of metals by use of aqueous solutions, except for acid solutions.
- (10) Equipment for washing or drying products fabricated from metal or glass; provided, that no volatile organic materials are used in the process and that no oil or solid fuel is burned.
- (11) Laundry dryers, extractors, or tumblers for fabrics cleaned with only water solutions of bleach or detergents.

h. Natural draft hoods or natural draft ventilators.

i. Containers, reservoirs, or tanks used exclusively for:

(1) Dipping operations for coating objects with oils, waxes, or greases, if no organic solvents are used.

(2) Dipping operations for applying coatings of natural or synthetic resins which contain no organic solvents.

(3) Storage of butane, propane, or liquefied petroleum or natural gas.

(4) Storage of lubricating oils.

(5) Storage of petroleum liquids except those containers, reservoirs, or tanks subject to the requirements of chapter 33.1-15-12.

j. Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials.

k. Crucible furnaces, pot furnaces, or induction furnaces, with a capacity of one thousand pounds [453.59 kilograms] or less each, unless otherwise noted, in which no sweating or distilling is conducted, nor any fluxing conducted utilizing chloride, fluoride, or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(1) Aluminum or any alloy containing over fifty percent aluminum; provided, that no gaseous chlorine compounds, chlorine, aluminum chloride, or aluminum fluoride are used.

(2) Magnesium or any alloy containing over fifty percent magnesium.

(3) Lead or any alloy containing over fifty percent lead, in a furnace with a capacity of five hundred fifty pounds [249.48 kilograms] or less.

(4) Tin or any alloy containing over fifty percent tin.

(5) Zinc or any alloy containing over fifty percent zinc.

(6) Copper.

(7) Precious metals.

l. Open burning activities within the scope of section 33.1-15-04-02.

m. Flares used to indicate some danger to the public.

n. Sources or alterations to a source which are of minor significance as determined by the department.

o. Oil and gas production facilities as defined in chapter 33.1-15-20 which are not a major source as defined in section 33.1-15-14-06.

14. Performance and emission testing.

- a. Emission tests or performance tests or both shall be conducted by the owner or operator of a facility and data reduced in accordance with the applicable procedure, limitations, standards, and test methods established by this article. Such tests must be conducted under the owner's or operator's permit to construct, and such permit is subject to the faithful completion of the test in accordance with this article.
- b. All dates and periods of trial operation for the purpose of performance or emission testing pursuant to a permit to construct must be approved in advance by the department. Trial operation shall cease if the department determines, on the basis of the test results, that continued operation will result in the violation of this article. Upon completion of any test conducted under a permit to construct, the department may order the cessation of the operation of the tested equipment or facility until such time as a permit to operate has been issued by the department.
- c. Upon review of the performance data resulting from any test, the department may require the installation of such additional control equipment as will bring the facility into compliance with this article.
- d. Nothing in this article may be construed to prevent the department from conducting any test upon its own initiative, or from requiring the owner or operator to conduct any test at such time as the department may determine.

15. Responsibility to comply.

- a. Possession of a permit to construct does not relieve any person of the responsibility to comply with this article.
- b. The exemption of any stationary source from the requirements of a permit to construct by reason of inclusion in subsection 13 does not relieve the owner or operator of such source of the responsibility to comply with any other applicable portions of this article.

16. Portable sources. Sources which are designated to be portable and which are not subject to the requirements of chapter 33.1-15-15 are exempt from requirements to obtain a permit to construct. The owner or operator shall submit an application for a permit to operate prior to initiating operations.

17. Registration of exempted stationary sources. The department may require that the owner or operator of any stationary source exempted under subsection 13 shall register the source with the department within such time limits and on such forms as the department may prescribe.

18. Extensions of time. The department may extend any of the time periods specified in subsections 4, 5, and 6 upon notification of the applicant by the department.

19. Amendment of permits. The department may, when the public interest requires or when necessary to ensure the accuracy of the permit, modify any condition or information contained in the permit to construct. Modification shall be made only upon the department's own motion and the procedure shall, at a minimum, conform to any requirements of federal and state law. In the event that the modification would be a major modification as defined in chapter 33.1-15-15, the department shall follow the

procedures established in chapter 33.1-15-15. For those of concern to the public, the department will provide:

- a. Reasonable notice to the public, in the area to be affected, of the opportunity for comment on the proposed modification, and the opportunity for a public hearing, upon request, as well as written public comment.
- b. A minimum of a thirty-day period for written public comment, with the opportunity for a public hearing during that thirty-day period, upon request.
- c. Consideration by the department of all comments received in its order for modification.

The department may require the submission of such maps, plans, specifications, emission information, and compliance schedules as it deems necessary prior to the issuance of an amendment. It is the intention of the department that this subsection shall apply only in those instances allowed by federal rules and regulations and only in those instances in which the granting of a variance pursuant to section 33.1-15-01-06 and enforcement of existing permit conditions are manifestly inappropriate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-14-03. Minor source permit to operate.

1. Permit to operate required.

- a. Except as provided in subdivisions c and d, no person may operate or cause the routine operation of an installation or source designated in section 33.1-15-14-01 without applying for and obtaining, in accordance with this section, a permit to operate. Application for a permit to operate a new installation or source must be made at least thirty days prior to startup of routine operation. Those sources that received a permit to construct under section 33.1-15-14-02, need only submit a thirty-day prior notice of proposed startup to satisfy the requirement to apply for a permit to operate under this subdivision.
- b. No person may operate or cause the operation of an installation or source in violation of any permit to operate or any condition imposed upon a permit to operate or in violation of this article.
- c. Sources that are subject to the title V permitting requirements of section 33.1-15-14-06 are exempt from the requirements of this section.
- d. Sources that are exempt from the requirement to obtain a permit to construct under subsection 13 of section 33.1-15-14-02 are exempt from this section.
- e. Sources which are subject to the title V permitting requirements in section 33.1-15-14-06 based solely on their potential to emit may apply for a federally enforceable minor source permit to operate which would limit their potential to emit to a level below the title V permit to operate applicability threshold.

f. Permits which are issued under this section which do not conform to the requirements of this section, including public participation under subdivision a of subsection 5 of section 33.1-15-14-03, and the requirements of any United States environmental protection agency regulations may be deemed not federally enforceable by the United States environmental protection agency.

g. General permits: The department may issue a general permit covering numerous similar sources. Any general permit shall comply with all requirements applicable to other minor source permits to operate and shall identify criteria by which sources may qualify for the general permit. To sources that qualify, the department shall grant the conditions and terms of the general permit. Sources that would qualify for a general permit must apply to the department for coverage under the terms of the general permit or apply for an individual minor source permit to operate. Without repeating the public participation procedures under subsection 5 of section 33.1-15-14-03, the department may grant a source's request for authorization to operate under a general permit.

2. Application for permit to operate.

a. Application for a permit to operate must be made by the owner or operator thereof on forms furnished by the department.

b. Each application for a permit to operate must be accompanied by such performance tests results, information, and records as may be required by the department to determine whether the requirements of this article will be met. Such information may also be required by the department at any time when the source is being operated to determine compliance with this article.

c. Each application must be signed by the applicant, which signature shall constitute an agreement that the applicant will assume responsibility for the operation of the installation or source in accordance with this article.

3. Standards for granting permits to operate. No permit to operate may be granted unless the applicant shows to the satisfaction of the department that the source is in compliance with this article.

4. Performance testing.

a. Before a permit to operate is granted, the applicant, if required by the department, shall conduct performance tests in accordance with methods and procedures required by this article or methods and procedures approved by the department. Such tests must be made at the expense of the applicant. The department may monitor such tests and may also conduct performance tests.

b. Emission tests or performance tests or both shall be conducted by the owner or operator of a facility and data reduced in accordance with the applicable procedure, limitations, standards, and test methods established by this article. Issuance of a minor source permit to operate is subject to the faithful completion of the test in accordance with this article.

c. All dates and periods of trial operation for the purpose of performance or emission testing pursuant to a permit to operate must be approved in advance by the department. Trial operation shall cease if the department determines, on the basis

of the test results, that continued operation will result in the violation of this article. Upon completion of any test conducted under a permit to construct, the department may order the cessation of the operation of the tested equipment or facility until such time as a permit to operate has been issued by the department.

d. Upon review of the performance data resulting from any test, the department may require the installation of such additional control equipment as will bring the facility into compliance with this article.

e. Nothing in this article may be construed to prevent the department from conducting any test upon its own initiative or from requiring the owner or operator to conduct any test at such time as the department may determine.

5. Action on applications.

a. Public participation: This subdivision is applicable to only those sources which apply for a federally enforceable minor source permit to operate which limits their potential to emit an air contaminant. The department shall:

(1) Within ninety days of receipt of a complete application:

(a) Make a preliminary determination concerning issuance of the permit to operate.

(b) Make available in at least one location in the county or counties in which the source is located or on the department's website, a copy of the proposed permit and copies of or a summary of the information considered in developing the permit.

(c) Publish notice to the public by prominent advertisement, in the region affected, of the opportunity for written comment on the proposed permit. The public notice must include the proposed location of the source.

(d) Provide notice of the proposed permit and public notice to any state or federal land manager, or Indian governing body whose lands will be significantly affected by the source's emissions. For purposes of this subparagraph, lands will be considered to be significantly affected if the source is located within thirty-one and seven hundredths miles [50 kilometers] of such land.

(e) Provide a copy of the proposed permit, all information considered in the development of the permit and the public notice to the regional administrator of the United States environmental protection agency.

(2) Allow thirty days for public comment.

(3) Consider all public comments properly received, in making the final decision on the application.

(4) Allow the applicant to submit written responses to public comments received by the department. The applicant's responses must be submitted to the department within twenty days of the close of the public comment period.

- (5) Take final action on the application within thirty days of the applicant's response to the public comments.
- (6) Provide a copy of the final permit, if issued, to the applicant, the regional administrator of the United States environmental protection agency, and anyone who requests a copy.
- b. For those sources not subject to public participation under subdivision a, the department shall act within thirty days after receipt of an application for a permit to operate a new installation or source, and within thirty days after receipt of an application to operate an existing installation or source, and shall notify the applicant, in writing, of the approval, conditional approval, or denial of the application.
- c. The department shall set forth in any notice of denial the reasons for denial. A denial must be without prejudice to the applicant's right to a hearing before the department or for filing a further application after revisions are made to meet objections specified as reasons for the denial.
- 6. Permit to operate - Conditions.** The department may impose any reasonable conditions upon a permit to operate. All emission limitations, controls, and other requirements imposed by conditions on the permit to operate must be at least as stringent as any applicable limitation or requirement contained in this article. Permit to operate conditions may include:
- a. Sampling, testing, and monitoring of the facilities or ambient air or both.
- b. Trial operation and performance testing.
- c. Prevention and abatement of nuisance conditions caused by operation of the facility.
- d. Recordkeeping and reporting.
- e. Compliance with applicable rules and regulations in accordance with a compliance schedule.
- f. Limits on the hours of operation of a source or its processing rate, fuel usage, or production rate when necessary to assure compliance with this article.
- 7. Suspension or revocation of permit to operate.**
- a. The department may suspend or revoke a permit to operate for violation of this article, violations of a permit condition, or failure to respond to a notice of violation or any order issued pursuant to this article.
- b. Suspension or revocation of a permit to operate shall become final ten days after serving notice on the holder of the permit.
- c. A permit to operate which has been revoked pursuant to this article must be surrendered forthwith to the department.
- d. No person may operate or cause the operation of an installation or source if the department denies or revokes a permit to operate.

8. **Transfer of permit to operate.** The holder of a permit to operate may not transfer it without the prior approval of the department.
9. **Renewal of permit to operate.** Every permit to operate issued by the department after February 9, 1976, must have a maximum term of five years. Applications for renewal of such permits must be submitted ninety days prior to the expiration date stated in the permit. The department shall approve or disapprove such application within ninety days. If a source submits a complete application for a permit renewal at least ninety days prior to the expiration date, the source's failure to have a minor source permit to operate is not a violation of this section until the department takes final action on the renewal application.
10. **[Reserved]**
11. **[Reserved]**
12. **Responsibility to comply.**
- a. Possession of a minor source permit to operate does not relieve any person of the responsibility to comply with this article.
- b. The exemption of any stationary source from the requirements to obtain a minor source permit to operate does not relieve the owner or operator of such source of the responsibility to comply with any other applicable portions of this article.
13. **Portable sources.** Sources which are designed to be portable and which are operated at temporary jobsites across the state may not be considered a new source by virtue of location changes. One application for a permit to operate any portable source may be filed in accordance with this chapter, and subsequent applications are not required for each temporary jobsite. The permit to operate issued by the department shall be conditioned by such specific requirements as the department deems appropriate to carry out the provisions of sections 33.1-15-01-07 and 33.1-15-01-15.
14. **Registration of exempted stationary sources.** The department may require that the owner or operator of any stationary source exempted from the requirement to obtain a minor source permit to operate to register the source with the department within such time limits and on such forms as the department may prescribe.
15. **Extensions of time.** The department may extend any of the time periods specified in this section upon notification of the applicant by the department.
16. **Amendment of permits.** When the public interest requires or when necessary to ensure the accuracy of the permit, the department may modify any condition or information contained in a minor source permit to operate. Modification shall be made only upon the department's own motion and the procedure shall, at a minimum, conform to any requirements of federal and state law. In the event that the modification would be a major modification as defined in chapter 33.1-15-15, the department shall follow the procedures established in chapter 33.1-15-15. For those of concern to the public, or modify a condition which limits the potential to emit of a source which possesses a federally enforceable permit, the department will provide:

- a. Reasonable notice to the public, in the area to be affected, of the opportunity for comment on the proposed modification and the opportunity for a public hearing, upon request, as well as written public comment.
- b. A minimum of a thirty-day period for written public comment with the opportunity for a public hearing during that thirty-day period, upon request.
- c. Consideration by the department of all comments received.

The department may require the submission of such maps, plans, specifications, emission information, and compliance schedules as it deems necessary prior to the issuance of an amendment. It is the intention of the department that this subsection shall apply only in those instances allowed by federal rules and regulations and only in those instances in which the granting of a variance pursuant to section 33.1-15-01-06 and enforcement of existing permit conditions are manifestly inappropriate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-14-04. [Reserved]

33.1-15-14-05. [Reserved]

33.1-15-14-06. Title V permit to operate.

1. Definitions. For purposes of this section:

- a. "Affected source" means any source that includes one or more affected units.
- b. "Affected state" means any state that is contiguous to North Dakota whose air quality may be affected by a source subject to a proposed title V permit, permit modification, or permit renewal or which is within fifty miles [80.47 kilometers] of the permitted source.
- c. "Affected unit" means a unit that is subject to any acid rain emissions reduction requirement or acid rain emissions limitation under title IV of the Federal Clean Air Act.
- d. "Alternative operating scenario (AOS)" means a scenario authorized in a title V permit that involves a change at the title V source for a particular emissions unit, and that either results in the unit being subject to one or more applicable requirements which differ from those applicable to the emissions unit prior to implementation of the change or renders inapplicable one or more requirements previously applicable to the emissions unit prior to implementation of the change.
- e. "Applicable requirement" means all of the following as they apply to emissions units at a source that is subject to requirements of this section (including requirements that have been promulgated or approved by the United States environmental protection agency through rulemaking at the time of issuance but have future-effective compliance dates):
 - (1) Any standard or other requirement provided for in the North Dakota state implementation plan approved or promulgated by the United States

environmental protection agency through rulemaking under title I of the Federal Clean Air Act that implements the relevant requirements of the Federal Clean Air Act, including any revisions to that plan.

- (2) Any term or condition of any permit to construct issued pursuant to this chapter.
- (3) Any standard or other requirement under section 111 including section 111(d) of the Federal Clean Air Act.
- (4) Any standard or other requirement under section 112 of the Federal Clean Air Act including any requirement concerning accident prevention under section 112(r)(7) of the Federal Clean Air Act.
- (5) Any standard or other requirement of the acid rain program under title IV of the Federal Clean Air Act.
- (6) Any requirements established pursuant to section 504(b) or section 114(a)(3) of the Federal Clean Air Act.
- (7) Any standard or other requirement governing solid waste incineration, under section 129 of the Federal Clean Air Act.
- (8) Any standard or other requirement for consumer and commercial products, under section 183(e) of the Federal Clean Air Act.
- (9) Any standard or other requirement for tank vessels under section 183(f) of the Federal Clean Air Act.
- (10) Any standard or other requirement of the program to control air pollution from outer continental shelf sources, under section 328 of the Federal Clean Air Act.
- (11) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under title VI of the Federal Clean Air Act, unless the administrator of the United States environmental protection agency has determined that such requirements need not be contained in a title V permit.
- (12) Any national ambient air quality standard or increment or visibility requirement under part C of title I of the Federal Clean Air Act, but only as it would apply to temporary sources permitted pursuant to section 504(e) of the Federal Clean Air Act.

f. "Approved replicable methodology (ARM)" means title V permit terms that:

- (1) Specify a protocol which is consistent with and implements an applicable requirement, or requirement of this section, such that the protocol is based on sound scientific or mathematical principles, or both, and provides reproducible results using the same inputs; and
- (2) Require the results of that protocol to be recorded and used for assuring compliance with such applicable requirement, any other applicable requirement implicated by implementation of the approved replicable methodology, or requirement of this section, including where an approved

replicable methodology is used for determining applicability of a specific requirement to a particular change.

- g. "Designated representative" means a responsible natural person authorized by the owners and operators of an affected source and of all affected units at the source, as evidenced by a certificate of representation submitted in accordance with subpart B of 40 CFR 72, to represent and legally bind each owner and operator, as a matter of federal law, in matters pertaining to the acid rain program. Whenever the term "responsible official" is used in this section, or in any other regulations implementing title V of the Federal Clean Air Act, it shall be deemed to refer to the "designated representative" with regard to all matters under the acid rain program.
- h. "Draft permit" means the version of a permit for which the department offers public participation or affected state review.
- i. "Emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the title V permit to operate, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
- j. "Emissions allowable under the permit" means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.
- k. "Emissions unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air contaminant or any contaminant listed under section 112(b) of the Federal Clean Air Act. This term does not alter or affect the definition of unit for purposes of title IV of the Federal Clean Air Act.
- l. "Environmental protection agency" or the "administrator" means the administrator of the United States environmental protection agency or the administrator's designee.
- m. "Federal Clean Air Act" means the Federal Clean Air Act, as amended [42 U.S.C. 7401 et seq.].
- n. "Final permit" means the version of a title V permit issued by the department that has completed all review procedures required in this section.
- o. "Fugitive emissions" are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
- p. "General permit" means a title V permit to operate that meets the requirements of subdivision d of subsection 5.

q. "Major source" means any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that are described in paragraph 1 or 2. For the purposes of defining "major source", a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the contaminant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same major group (i.e., all have the same two-digit code) as described in the standard industrial classification manual, 1987.

(1) A major source under section 112 of the Federal Clean Air Act, which is defined as:

(a) For contaminants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, ten tons [9.07 metric tons] per year (tpy) or more of any hazardous air contaminant which has been listed pursuant to section 112(b) of the Federal Clean Air Act, twenty-five tons [22.67 metric tons] per year or more of any combination of such hazardous air contaminants, or such lesser quantity as the administrator of the United States environmental protection agency may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources.

(b) For radionuclides, "major source" shall have the meaning specified by the administrator of the United States environmental protection agency by rule.

(2) A major stationary source of air contaminants, that directly emits or has the potential to emit, one hundred tons [90.68 metric tons] per year or more of any air contaminant subject to regulation (including any major source of fugitive emissions of any such contaminant, as determined by rule by the administrator of the United States environmental protection agency). For purposes of this definition, air contaminant subject to regulation does not include greenhouse gases as defined in title 40, Code of Federal Regulations, 86.1818-12(a). The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of this section, unless the source belongs to one of the following categories of stationary source:

(a) Coal cleaning plants (with thermal dryers).

(b) Kraft pulp mills.

(c) Portland cement plants.

- (d) Primary zinc smelters.
 - (e) Iron and steel mills.
 - (f) Primary aluminum ore reduction plants.
 - (g) Primary copper smelters.
 - (h) Municipal incinerators capable of charging more than two hundred fifty tons [226.80 metric tons] of refuse per day.
 - (i) Hydrofluoric, sulfuric, or nitric acid plants.
 - (j) Petroleum refineries.
 - (k) Lime plants.
 - (l) Phosphate rock processing plants.
 - (m) Coke oven batteries.
 - (n) Sulfur recovery plants.
 - (o) Carbon black plants (furnace process).
 - (p) Primary lead smelters.
 - (q) Fuel conversion plants.
 - (r) Sintering plants.
 - (s) Secondary metal production plants.
 - (t) Chemical process plants.
 - (u) Fossil-fuel boilers (or combination thereof) totaling more than two hundred fifty million British thermal units per hour heat input.
 - (v) Petroleum storage and transfer units with a total storage capacity exceeding three hundred thousand barrels.
 - (w) Taconite ore processing plants.
 - (x) Glass fiber processing plants.
 - (y) Charcoal production plants.
 - (z) Fossil-fuel-fired steam electric plants of more than two hundred fifty million British thermal units per hour heat input.
 - (aa) Any other stationary source category which as of August 7, 1980, is being regulated under section 111 or 112 of the Federal Clean Air Act.
- r. "Permit modification" means a revision to a title V permit that meets the requirements of subdivision e of subsection 6.

- s. "Permit program costs" means all reasonable (direct and indirect) costs required to develop and administer a permit program, under this section (whether such costs are incurred by the department or other state or local agencies that do not issue permits directly, but that support permit issuance or administration).
- t. "Permit revision" means any permit modification or administrative permit amendment.
- u. "Potential to emit" means the maximum capacity of a stationary source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the administrator of the United States environmental protection agency and the department.
- v. "Proposed permit" means the version of a permit that the department proposes to issue and forwards to the administrator of the United States environmental protection agency for review.
- w. "Regulated air contaminant" means the following:
- (1) Nitrogen oxides or any volatile organic compounds.
 - (2) Any contaminant for which a national ambient air quality standard has been promulgated.
 - (3) Any contaminant that is subject to any standard promulgated under section 111 of the Federal Clean Air Act.
 - (4) Any class I or II substance subject to a standard promulgated under or established by title VI of the Federal Clean Air Act.
 - (5) Any contaminant subject to a standard promulgated under section 112 or other requirements established under section 112 of the Federal Clean Air Act, including sections 112(g), (j), and (r) of the Federal Clean Air Act, including the following:
 - (a) Any contaminant subject to requirements under section 112(j) of the Federal Clean Air Act. If the administrator fails to promulgate a standard by the date established pursuant to section 112(e) of the Federal Clean Air Act, any contaminant for which a subject source would be major shall be considered to be regulated on the date eighteen months after the applicable date established pursuant to section 112(e) of the Federal Clean Air Act; and
 - (b) Any contaminant for which the requirements of section 112(g)(2) of the Federal Clean Air Act have been met, but only with respect to the individual source subject to section 112(g)(2) of the Federal Clean Air Act requirement.
- x. "Regulated contaminant" for fee calculation, which is used only for chapter 33.1-15-23, means any "regulated air contaminant" except the following:

- (1) Carbon monoxide.
- (2) Any contaminant that is a regulated air contaminant solely because it is a class I or II substance subject to a standard promulgated under or established by title VI of the Federal Clean Air Act.
- (3) Any contaminant that is a regulated air contaminant solely because it is subject to a standard or regulation under section 112(r) of the Federal Clean Air Act.
- (4) Greenhouse gases.
- y. "Renewal" means the process by which a permit is reissued at the end of its term.
- z. "Responsible official" means one of the following:
- (1) For a corporation: a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decisionmaking functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
- (a) The facilities employ more than two hundred fifty persons or have gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars).
- (b) The delegation of authority to such representatives is approved in advance by the department.
- (2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
- (3) For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this section, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a regional administrator of the United States environmental protection agency).
- (4) For affected sources:
- (a) The designated representative insofar as actions, standards, requirements, or prohibitions under title IV of the Federal Clean Air Act or the regulations promulgated thereunder are concerned.
- (b) The designated representative for any other purposes under this section.
- aa. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions

that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

bb. "Stationary source" means any building, structure, facility, or installation that emits or may emit any regulated air contaminant or any contaminant listed under section 112(b) of the Federal Clean Air Act.

cc. "Subject to regulation" means, for any air contaminant, that the air contaminant is subject to either a provision in the Federal Clean Air Act, or a nationally applicable regulation codified by the administrator of the United States environmental protection agency in title 40, Code of Federal Regulations, chapter I, subchapter C, that requires actual control of the quantity of emissions of that air contaminant, and that such a control requirement has taken effect and is operative to control, limit, or restrict the quantity of emissions of that air contaminant release from the regulated activity.

dd. "Title V permit to operate or permit" (unless the context suggests otherwise) means any permit or group of permits covering a source that is subject to this section that is issued, renewed, amended, or revised pursuant to this section.

ee. "Title V source" means any source subject to the permitting requirements of this section, as provided in subsection 2.

2. Applicability.

a. This section is applicable to the following sources:

(1) Any major source.

(2) Any source, including an area source, subject to a standard, limitation, or other requirement under section 111 of the Federal Clean Air Act.

(3) Any source, including an area source, subject to a standard or other requirement under section 112 of the Federal Clean Air Act, except that a source is not required to obtain a permit solely because it is subject to regulations or requirements under section 112(r) of the Federal Clean Air Act.

(4) Any affected source.

(5) Any source in a source category designated by the administrator of the United States environmental protection agency.

b. The following source categories are exempt from the requirements of this section:

(1) All sources listed in subdivision a that are not major sources, affected sources, or solid waste incineration units required to obtain a permit pursuant to section 129(e) of the Federal Clean Air Act, are exempt from the obligation to obtain a title V permit until such time as the administrator of the United States environmental protection agency completes a rulemaking to determine how the program should be structured for nonmajor sources and the appropriateness of any permanent exemptions.

-
- (2) In the case of nonmajor sources subject to a standard or other requirement under either section 111 or 112 of the Federal Clean Air Act after July 21, 1992, those the administrator of the United States environmental protection agency determines to be exempt from the requirement to obtain a title V source permit at the time that the new standard is promulgated.
-
- (3) Any source listed as exempt from the requirement to obtain a permit under this section may opt to apply for a title V permit. Sources that are exempted by paragraphs 1 and 2 and which do not opt to apply for a title V permit to operate are subject to the requirements of section 33.1-15-14-03.
-
- (4) The following source categories are exempted from the obligation to obtain a permit under this section.
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- (a) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 CFR 60, subpart AAA - standards of performance for new residential wood heaters.
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- (b) All sources and source categories that would be required to obtain a permit solely because they are subject to 40 CFR 61, subpart M - national emission standard for hazardous air pollutants for asbestos, section 61.145, standard for demolition and renovation.
-
- c. For major sources, the department will include in the permit all applicable requirements for all relevant emissions units in the major source.
- For any nonmajor source subject to the requirements of this section, the department will include in the permit all applicable requirements applicable to the emissions units that cause the source to be subject to this section.
-
- d. Fugitive emissions from a source subject to the requirements of this section shall be included in the permit application and the permit in the same manner as stack emissions, regardless of whether the source category in question is included in the list of sources contained in the definition of major source.
-
3. **Scope.** Nothing within this section shall relieve the owner or operator of a source of the requirement to obtain a permit to construct under section 33.1-15-14-02 or to comply with any other applicable standard or requirement of this article.
-
4. **Permit applications.**
-
- a. Duty to apply. For each title V source, the owner or operator shall submit a timely and complete permit application in accordance with this subdivision.
-
- (1) Timely application.
-
- (a) A timely application for a source applying for a title V permit for the first time is one that is submitted within one year of the source becoming subject to this section.
-
- (b) Title V sources required to meet the requirements under section 112(g) of the Federal Clean Air Act, or to have a permit to construct under section 33.1-15-14-02, shall file a complete application to obtain the

title V permit or permit revision within twelve months after commencing operation. Where an existing title V permit would prohibit such construction or change in operation, the source must obtain a permit revision before commencing operation.

(c) For purposes of permit renewal, a timely application is one that is submitted at least six months, but not more than eighteen months, prior to the date of permit expiration.

(2) Complete application. To be deemed complete, an application must provide all information required pursuant to subdivision c, except that applications for a permit revision need supply such information only if it is related to the proposed change. Information required under subdivision c must be sufficient to evaluate the subject source and its application and to determine all applicable requirements. A responsible official must certify the submitted information consistent with subdivision d. Unless the department determines that an application is not complete within sixty days of receipt of the application, such application shall be deemed to be complete, except as otherwise provided in paragraph 3 of subdivision a of subsection 6. If, while processing an application that has been determined or deemed to be complete, the department determines that additional information is necessary to evaluate or take final action on that application, it may request such information in writing and set a reasonable deadline for a response. The source's ability to operate without a permit, as set forth in subdivision b of subsection 6, shall be in effect from the date the application is determined or deemed to be complete until the final permit is issued, provided that the applicant submits any requested additional information by the deadline specified by the department.

(3) Confidential information. If a source has submitted information to the department under a claim of confidentiality, the source must also submit a copy of such information directly to the administrator of the United States environmental protection agency when directed to do so by the department.

b. Duty to supplement or correct application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

c. Standard application form and required information. All applications for a title V permit to operate shall be made on forms supplied by the department. Information as described below for each emissions unit at a title V source shall be included in the application. Detailed information for emissions units or activities that have the potential to emit less than the following quantities of air contaminants (insignificant units or activities) need not be included in permit applications:

Particulate: 2 tons [1.81 metric tons] per year

Inhalable particulate: 2 tons [1.81 metric tons] per year

Sulfur dioxide: 2 tons [1.81 metric tons] per year

Hydrogen sulfide: 2 tons [1.81 metric tons] per year

Carbon monoxide: 2 tons [1.81 metric tons] per year

Nitrogen oxides: 2 tons [1.81 metric tons] per year

Ozone: 2 tons [1.81 metric tons] per year

Reduced sulfur compounds: 2 tons [1.81 metric tons] per year

Volatile organic compounds: 2 tons [1.81 metric tons]

All other regulated contaminants including those in section 112(b) of the Federal Clean Air Act: 0.5 tons [0.45 metric tons] per year.

Where a contaminant could be placed in more than one category, the smallest emission level applies.

However, for insignificant activities or emissions units, a list of such activities or units must be included in the application. An applicant may not omit information needed to determine the applicability of, or to impose, any applicable requirement, or to evaluate the fee amount required under section 33.1-15-23-04. The application, shall, as a minimum, include the elements specified below:

(1) Identifying information, including company name and address (or plant name and address if different from the company name), owner's name and agent, and telephone number and names of plant site manager or contact.

(2) A description of the source's processes and products (by Standard Industrial Classification Code) including those associated with any proposed alternative operating scenario identified by the source.

(3) The following emissions-related information:

(a) All emissions of contaminants for which the source is major, and all emissions of regulated air contaminants. A permit application shall describe all emissions of regulated air contaminants emitted from any emissions unit, except when such units are exempted under this subdivision.

(b) Identification and description of all points of emissions described in subparagraph a in sufficient detail to establish the basis for fees and applicability of requirements of the Federal Clean Air Act and this article.

(c) Emissions rates in tons per year and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method. For emissions units subject to an annual emissions cap, tons per year can be reported as part of the aggregate emissions associated with the cap, except where more specific information is needed, including where necessary to determine or assure compliance with, or both, an applicable requirement.

(d) Fuels, fuel use, raw materials, production rates, and operating schedules.

(e) Identification and description of air pollution control equipment and compliance monitoring devices or activities.

(f) Limitations on source operation affecting emissions or any work practice standards, when applicable, for all regulated contaminants.

(g) Other information required by any applicable requirement including information related to stack height limitations developed pursuant to chapter 33.1-15-18.

(h) Calculations on which the information in subparagraphs a through g is based.

(4) The following air pollution control requirements:

(a) Citation and description of all applicable requirements; and

(b) Description of or reference to any applicable test method for determining compliance with each applicable requirement.

(5) Other specific information that may be necessary to implement and enforce other applicable requirements of the Federal Clean Air Act or of this article or to determine the applicability of such requirements.

(6) An explanation of any proposed exemptions from otherwise applicable requirements.

(7) Additional information as determined to be necessary by the department to define proposed alternative operating scenarios identified by the source pursuant to paragraph 9 of subdivision a of subsection 5 of section 33.1-15-14-06 or to define permit terms and conditions implementing any alternative operating scenario under paragraph 9 of subdivision a of subsection 5 of section 33.1-15-14-06 or implementing paragraph 2 of subdivision b of subsection 6 of section 33.1-15-14-06, paragraph 3 of subdivision b of subsection 6 of section 33.1-15-14-06, paragraph 8 of subdivision a of subsection 5 of section 33.1-15-14-06, or paragraph 10 of subdivision a of subsection 5 of section 33.1-15-14-06. The permit application shall include documentation demonstrating that the source has obtained all authorizations required under the applicable requirements relevant to any proposed alternative operating scenarios, or a certification that the source has submitted all relevant materials to the department for obtaining such authorizations.

(8) A compliance plan for all title V sources that contains all the following:

(a) A description of the compliance status of the source with respect to all applicable requirements.

(b) A description as follows:

[1] For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements.

[2] For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis.

[3] For requirements for which the source is not in compliance at the time of permit issuance, a narrative description of how the source will achieve compliance with such requirements.

[4] For applicable requirements associated with a proposed alternative operating scenario, a statement that the source will meet such requirements upon implementation of the alternative operating scenario. If a proposed alternative operating scenario would implicate an applicable requirement that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis.

(c) A compliance schedule as follows:

[1] For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements.

[2] For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis. A statement that the source will meet in a timely manner applicable requirements that become effective during the permit term shall satisfy this provision, unless a more detailed schedule is expressly required by the applicable requirement.

[3] A schedule of compliance for sources that are not in compliance with all applicable requirements at the time of permit issuance. Such a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the source will be in noncompliance at the time of permit issuance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.

[4] For applicable requirements associated with a proposed alternative operating scenario, a statement that the source will meet such requirements upon implementation of the alternative operating scenario. If a proposed alternative operating scenario would implicate an applicable requirement that will become

effective during the permit term, a statement that the source will meet such requirements on a timely basis. A statement that the source will meet in a timely manner applicable requirements that become effective during the permit term will satisfy this provision, unless a more detailed schedule is expressly required by the applicable requirement.

(d) A schedule for submission of certified progress reports no less frequently than every six months for sources required to have a schedule of compliance to remedy a violation.

(e) The compliance plan content requirements specified in this paragraph shall apply and be included in the acid rain portion of a compliance plan for an affected source, except as specifically superseded by regulations promulgated under title IV of the Federal Clean Air Act with regard to the schedule and method or methods the source will use to achieve compliance with the acid rain emissions limitations.

(9) Requirements for compliance certification, including the following:

(a) A certification of compliance with all applicable requirements by a responsible official consistent with subdivision d and section 114(a)(3) of the Federal Clean Air Act;

(b) A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods;

(c) A schedule for submission of compliance certifications during the permit term, to be submitted annually, or more frequently if specified by the underlying applicable requirement; and

(d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Federal Clean Air Act.

(10) The use of nationally standardized forms for acid rain portions of permit applications and compliance plans, as required by regulations promulgated under title IV of the Federal Clean Air Act.

d. Any application form, report, or compliance certification submitted pursuant to these rules shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this section shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Permit content.

a. Standard permit requirements. Each permit issued under this section shall include, as a minimum, the following elements:

(1) Emissions limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. Such requirements and limitations may include approved replicable methodologies identified by the source in its title V permit application as approved by the department, provided that no approved replicable methodology shall contravene any terms needed to comply with any otherwise applicable requirement or requirement of this section or circumvent any applicable requirement that would apply as a result of implementing the approved replicable methodology.

(a) The permit must specify and reference the origin of and authority for each term or condition, and identify any difference in form as compared to the applicable requirement upon which the term or condition is based.

(b) The permit must state that, if an applicable requirement of the Federal Clean Air Act is more stringent than an applicable requirement of regulations promulgated under title IV of the Federal Clean Air Act, both provisions shall be incorporated into the permit and shall be enforceable by the administrator of the United States environmental protection agency and the department.

(c) If the state implementation plan allows a determination of an alternative emissions limit at a title V source, equivalent to that contained in the plan, to be made in the permit issuance, renewal, or significant modification process, and the department elects to use such process, any permit containing such equivalency determination shall contain provisions to ensure that any resulting emissions limit has been demonstrated to be quantifiable, accountable, enforceable, and based on replicable procedures.

(2) Permit duration. For all sources, the term of the permit may not exceed five years. The permit expires on the date listed on the permit.

(3) Monitoring and related recordkeeping and reporting requirements.

(a) Each permit shall contain the following requirements with respect to monitoring:

[1] All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including subsection 10 and any procedures and methods promulgated pursuant to sections 504(b) or 114(a)(3) of the Federal Clean Air Act. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining;

[2] If the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit, as reported pursuant to subparagraph c. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements of this item; and

[3] As necessary, requirements concerning the use, maintenance, and, if appropriate, installation of monitoring equipment or methods.

(b) With respect to recordkeeping, the permit shall incorporate all applicable recordkeeping requirements and require, if applicable, the following:

[1] Records of required monitoring information that include the following:

[a] The date, place as defined in the permit, and time of sampling or measurements;

[b] The dates analyses were performed;

[c] The company or entity that performed the analyses;

[d] The analytical techniques or methods used;

[e] The results of such analyses; and

[f] The operating conditions as existing at the time of sampling or measurement;

[2] Retention of records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

(c) With respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following:

[1] Submittal of reports of any required monitoring at least every six months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with subdivision d of subsection 4.

[2] Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the

probable cause of such deviations, and any corrective actions or preventive measures taken. The department shall define "prompt" in the permit consistent with chapter 33.1-15-01 and the applicable requirements.

(4) A permit condition prohibiting emissions exceeding any allowances that the source lawfully holds under title IV of the Federal Clean Air Act or the regulations promulgated thereunder.

(a) No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to title IV of the Federal Clean Air Act, or the regulations promulgated thereunder, provided that such increases do not require a permit revision under any other applicable requirement.

(b) No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

(c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under title IV of the Federal Clean Air Act.

(5) A severability clause to ensure the continued validity of the various permit requirements in the event of a challenge to any portions of the permit.

(6) Provisions stating the following:

(a) The permittee must comply with all conditions of the title V permit. Any permit noncompliance constitutes a violation of the Federal Clean Air Act and this article and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(d) The permit does not convey any property rights of any sort, or any exclusive privilege.

(e) The permittee must furnish to the department, within a reasonable time, any information that the department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the department copies of records required to be kept by the permit or, for information claimed to

be confidential, the permittee must also furnish such records directly to the administrator of the United States environmental protection agency along with a claim of confidentiality.

(7) A provision to ensure that the source pays fees to the department consistent with the fee schedule in chapter 33.1-15-23.

(8) Emissions trading. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit and the state implementation plan.

(9) Terms and conditions for reasonably anticipated alternative operating scenarios identified by the source in its application as approved by the department. Such terms and conditions:

(a) Shall require the source, contemporaneously with making a change from one operating scenario to another, to record in a log at the permitted facility a record of the alternative operating scenario under which it is operating;

(b) Shall extend the permit shield described in subdivision f to all terms and conditions under each such alternative operating scenario; and

(c) Must ensure that the terms and conditions of each such alternative scenario meet all applicable requirements and the requirements of this section. The department shall not approve a proposed alternative operating scenario into the title V permit until the source has obtained all authorizations required under any applicable requirement relevant to that alternative operating scenario.

(10) Terms and conditions, if the permit applicant requests them, for the trading of emissions increases and decreases in the permitted facility, to the extent that the applicable requirements, including the state implementation plan, provide for trading such increases and decreases without a case-by-case approval of each emissions trade. Such terms and conditions:

(a) Shall include all terms required under subdivisions a and c to determine compliance;

(b) Shall extend the permit shield described in subdivision f to all terms and conditions that allow such increases and decreases in emissions; and

(c) Must meet all applicable requirements and requirements of this section.

(11) If a permit applicant requests it, the department shall issue permits that contain terms and conditions, including all terms required under subdivisions a and c to determine compliance, allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit independent of otherwise applicable requirements provided the changes in emissions are not modifications under title I of the Federal Clean Air Act and the changes do not exceed the emissions

allowable under the permit. The permit applicant shall include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The department shall not be required to include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall also require compliance with all applicable requirements. The permittee shall supply written notification at least seven days prior to the change to the department and the administrator of the United States environmental protection agency and shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit. The permit shield described in subdivision f shall extend to terms and conditions that allow such increases and decreases in emissions.

b. Federally enforceable requirements.

(1) All terms and conditions in a title V permit, including any provisions designed to limit a source's potential to emit, are enforceable by the administrator of the United States environmental protection agency and citizens under the Federal Clean Air Act.

(2) Notwithstanding paragraph 1, the department shall specifically designate as not being federally enforceable under the Federal Clean Air Act any terms and conditions included in the permit that are not required under the Federal Clean Air Act or under any of its applicable requirements. Terms and conditions so designated are not subject to the requirements of subsections 6 and 7, or of this subsection, other than those contained in this subdivision.

c. Compliance requirements. All title V permits shall contain the following elements with respect to compliance:

(1) Consistent with paragraph 3 of subdivision a, compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit. Any document, including reports, required by a title V permit shall contain a certification by a responsible official that meets the requirements of subdivision d of subsection 4.

(2) Inspection and entry requirements that require that, upon presentation of credentials and other documents as may be required by law, the permittee shall allow the department or an authorized representative to perform the following:

(a) Enter upon the permittee's premises where a title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

(d) As authorized by the Federal Clean Air Act and this article, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(3) A schedule of compliance consistent with paragraph 8 of subdivision c of subsection 4.

(4) Progress reports consistent with an applicable schedule of compliance and paragraph 8 of subdivision c of subsection 4 to be submitted at least semiannually, or at a more frequent period if specified in the applicable requirement or by the department. Such progress reports shall contain the following:

(a) Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones, or compliance were achieved; and

(b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

(5) Requirements for compliance certification with terms and conditions contained in the permit, including emissions limitations, standards, or work practices. Permits shall include each of the following:

(a) The frequency, which is annually or such more frequent periods as specified in the applicable requirement or by the department, of submissions of compliance certifications;

(b) In accordance with paragraph 3 of subdivision a, a means for monitoring the compliance of the source with its emissions limitations, standards, and work practices. The means for monitoring shall be contained in applicable requirements or United States environmental protection agency guidance;

(c) A requirement that the compliance certification include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable):

[1] The identification of each term or condition of the permit that is the basis of the certification;

[2] The identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under paragraph 3 of subdivision a. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with

section 113(c)(2) of the federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;

[3] The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the method or means designated in item 2. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under subsection 10 occurred; and

[4] Such other facts as the department may require to determine the compliance status of the source;

(d) A requirement that all compliance certifications be submitted to the administrator of the United States environmental protection agency as well as to the department; and

(e) Such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Federal Clean Air Act.

(6) Such other provisions as the department may require.

d. General permits.

(1) The department may, after notice and opportunity for public participation provided under subdivision h of subsection 6, issue a general permit covering numerous similar sources. Any general permit shall comply with all requirements applicable to other title V permits and shall identify criteria by which sources may qualify for the general permit. To sources that qualify, the department shall grant the conditions and terms of the general permit. Notwithstanding the shield provisions of subdivision f, the source shall be subject to enforcement action for operation without a title V permit to operate if the source is later determined not to qualify for the conditions and terms of the general permit. General permits shall not be authorized for affected sources under the acid rain program unless otherwise provided in regulations promulgated under title IV of the Federal Clean Air Act. The department is not required to issue a general permit in lieu of individual title V permits.

(2) Title V sources that would qualify for a general permit must apply to the department for coverage under the terms of the general permit or must apply for a title V permit to operate consistent with subsection 4. The department may, in the general permit, provide for applications which deviate from the requirements of subsection 4, provided that such applications meet the requirements of title V of the Federal Clean Air Act, and include all information necessary to determine qualification for, and to assure compliance with, the general permit. Without repeating the public participation procedures required under subdivision h of subsection 6, the

department may grant a source's request for authorization to operate under a general permit, but such a grant shall not be a final permit action for purposes of judicial review.

e. Temporary sources. The department may issue a single permit authorizing emissions from similar operations by the same source owner or operator at multiple temporary locations. The operation must be temporary and involve at least one change of location during the term of the permit. No affected source shall be permitted as a temporary source. Permits for temporary sources shall include the following:

- (1) Conditions that will assure compliance with all applicable requirements at all authorized locations;
- (2) Requirements that the owner or operator notify the department at least ten days in advance of each change in location; and
- (3) Conditions that assure compliance with all other provisions of this section.

f. Permit shield.

(1) Except as provided in this section, upon written request by the applicant, the department shall include in a title V permit to operate a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirement as of the date of permit issuance, provided that:

- (a) Such applicable requirements are included and are specifically identified in the permit; or
- (b) The department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.

(2) A title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.

(3) Nothing in this subdivision or in any title V permit shall alter or affect the following:

- (a) The provisions of section 303 of the Federal Clean Air Act (emergency orders), including the authority of the administrator of the United States environmental protection agency under that section;
- (b) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- (c) The applicable requirements of the acid rain program, consistent with section 408(a) of the Federal Clean Air Act; or
- (d) The ability of the United States environmental protection agency to obtain information from a source pursuant to section 114 of the Federal Clean Air Act.

g. Emergency provision.

- (1) An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emissions limitation under the title V permit to operate, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
- (2) Effect of an emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emissions limitations if the conditions of paragraph 3 are met.
- (3) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (a) An emergency occurred and that the permittee can identify the causes of the emergency;
 - (b) The permitted facility was at the time being properly operated;
 - (c) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in the permit; and
 - (d) The permittee submitted notice of the emergency to the department within one working day of the time when emissions limitations were exceeded due to the emergency. This notice fulfills the requirement of item 2 of subparagraph c of paragraph 3 of subdivision a. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (4) In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (5) This provision is in addition to any emergency or upset provision contained in any applicable requirement and the malfunction notification required under subdivision b of subsection 2 of section 33.1-15-01-13 when a threat to health and welfare would exist.

6. Permit issuance, renewal, reopenings, and revisions.

a. Action on application.

- (1) A permit, permit modification, or permit renewal may be issued only if all of the following conditions have been met:
 - (a) The department has received a complete application for a permit, permit modification, or permit renewal, except that a complete

application need not be received before issuance of a general permit under subdivision d of subsection 5;

(b) Except for modifications qualifying for minor permit modification procedures under paragraphs 1 and 2 of subdivision e, the department has complied with the requirements for public participation under subdivision h;

(c) The department has complied with the requirements for notifying and responding to affected states under subdivision b of subsection 7;

(d) The conditions of the permit provide for compliance with all applicable requirements and the requirements of this section; and

(e) The administrator of the United States environmental protection agency has received a copy of the proposed permit and any notices required under subdivisions a and b of subsection 7, and has not objected to issuance of the permit under subdivision c of subsection 7 within the time period specified therein.

(2) Except for applications received during the initial transitional period described in 40 CFR 70.4(b)(11) or under regulations promulgated under title IV or title V of the Federal Clean Air Act for the permitting of affected sources under the acid rain program, the department shall take final action on each permit application, including a request for permit modification or renewal, within eighteen months after receiving a complete application.

(3) The department shall provide notice to the applicant of whether the application is complete. Unless the department requests additional information or otherwise notifies the applicant of incompleteness within sixty days of receipt of an application, the application shall be deemed complete. For modifications processed through the minor permit modification procedures, in paragraphs 1 and 2 of subdivision e, a completeness determination is not required.

(4) The department shall provide a statement that sets forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions. The department shall send this statement to the United States environmental protection agency and to any other person who requests it.

(5) The submittal of a complete application shall not affect the requirement that any source have a permit to construct under section 33.1-15-14-02.

b. Requirement for a permit.

(1) Except as provided in the following sentence, paragraphs 2 and 3, subparagraph e of paragraph 1 of subdivision e, and subparagraph e of paragraph 2 of subdivision e, no title V source may operate after the time that it is required to submit a timely and complete application under this section, except in compliance with a permit issued under this section. If a title V source submits a timely and complete application for permit issuance, including for renewal, the source's failure to have a title V permit is not a

violation of this section until the department takes final action on the permit application, except as noted in this subsection. This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 3 of subdivision a, and as required by paragraph 2 of subdivision a of subsection 4, the applicant fails to submit by the deadline specified in writing by the department any additional information identified as being needed to process the application. For timely and complete renewal applications for which the department has failed to issue or deny the renewal permit before the expiration date of the previous permit, all the terms and conditions of the permit, including the permit shield that was granted pursuant to subdivision f of subsection 5 shall remain in effect until the renewal permit has been issued or denied.

(2) A permit revision is not required for section 502(b)(10) changes provided:

(a) The changes are not modifications under chapters 33.1-15-12, 33.1-15-13, and 33.1-15-15 or title I of the Federal Clean Air Act.

(b) The changes do not exceed the emissions allowable under the title V permit whether expressed therein as a rate of emissions or in terms of total emissions.

(c) A permit to construct under section 33.1-15-14-02 has been issued, if required.

(d) The facility provides the department and the administrator of the United States environmental protection agency with written notification at least seven days in advance of the proposed change. The written notification shall include a description of each change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

The permit shield described in subdivision f of subsection 5 shall not apply to any change made pursuant to this paragraph.

(3) A permit revision is not required for changes that are not addressed or prohibited by the permit provided:

(a) Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition.

(b) The source must provide contemporaneous written notice to the department and the administrator of the United States environmental protection agency of each such change, except for changes that qualify as insignificant under the provisions of subdivision c of subsection 4. Such written notice shall describe each such change, including the date, any change in emissions, contaminants emitted, and any applicable requirement that would apply as a result of the change.

(c) The permittee shall keep a record describing changes made at the source that result in emissions of a regulated air contaminant subject to

an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

(d) The changes are not subject to any requirements under title IV of the Federal Clean Air Act.

(e) The changes are not modifications under chapters 33.1-15-12, 33.1-15-13, and 33.1-15-15 or any provision of title I of the Federal Clean Air Act.

(f) A permit to construct under section 33.1-15-14-02 has been issued, if required.

The permit shield described in subdivision f of subsection 5 shall not apply to any change made pursuant to this paragraph.

c. Permit renewal and expiration.

(1) Permits being renewed are subject to the same procedural requirements, including those for public participation, affected state and the United States environmental protection agency review, that apply to initial permit issuance; and

(2) Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with subdivision b of subsection 6 and subparagraph c of paragraph 1 of subdivision a of subsection 4.

d. Administrative permit amendments.

(1) An "administrative permit amendment" is a permit revision that:

(a) Corrects typographical errors;

(b) Identifies a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;

(c) Requires more frequent monitoring or reporting by the permittee;

(d) Allows for a change in ownership or operational control of a source if the department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the department;

(e) Incorporates into the title V permit the requirements from a permit to construct, provided that the permit to construct review procedure is substantially equivalent to the requirements of subsections 6 and 7 that would be applicable to the change if it were subject to review as a permit modification, and compliance requirements substantially equivalent to those contained in subsection 5; or

- (f) Incorporates any other type of change which the administrator of the United States environmental protection agency has approved as being an administrative permit amendment as part of the approved title V operating permit program.
- (2) Administrative permit amendments for purposes of the acid rain portion of the permit shall be governed by regulations promulgated under title IV of the Federal Clean Air Act.
- (3) Administrative permit amendment procedures. An administrative permit amendment may be made by the department consistent with the following:
- (a) The department shall take no more than sixty days from receipt of a request for an administrative permit amendment to take final action on such request, and may incorporate such changes without providing notice to the public or affected states provided that it designates any such permit revisions as having been made pursuant to this subdivision.
- (b) The department shall submit a copy of the revised permit to the administrator of the United States environmental protection agency.
- (c) The source may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request provided a permit to construct under section 33.1-15-14-02 has been issued, if required.
- (4) The department may, upon taking final action granting a request for an administrative permit amendment, allow coverage by the permit shield in subdivision f of subsection 5 for administrative permit amendments made pursuant to subparagraph e of paragraph 1 of subdivision d which meet the relevant requirements of subsections 5, 6, and 7 for significant permit modifications.
- e. Permit modification. A permit modification is any revision to a title V permit that cannot be accomplished under the provisions for administrative permit amendments under subdivision d. A permit modification for purposes of the acid rain portion of the permit shall be governed by regulations promulgated under title IV of the Federal Clean Air Act.
- (1) Minor permit modification procedures.
- (a) Criteria.
- [1] Minor permit modification procedures may be used only for those permit modifications that:
- [a] Do not violate any applicable requirement;
- [b] Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- [c] Do not require or change a case-by-case determination of an emissions limitation or other standard, or a source-specific

determination for temporary sources of ambient impacts, or a visibility or increment analysis;

[d] Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of title I of the Federal Clean Air Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act;

[e] Are not modifications under chapters 33.1-15-12, 33.1-15-13, and 33.1-15-15 or any provision of title I of the Federal Clean Air Act; and

[f] Are not required to be processed as a significant modification.

[2] Notwithstanding item 1 and subparagraph a of paragraph 2 of subdivision e, minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in the state implementation plan, or in applicable requirements promulgated by the United States environmental protection agency.

(b) Application. An application requesting the use of minor permit modification procedures shall meet the requirements of subdivision c of subsection 4 and shall include the following:

[1] A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;

[2] The source's suggested draft permit;

[3] Certification by a responsible official, consistent with subdivision d of subsection 4, that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and

[4] Completed forms for the department to use to notify the administrator of the United States environmental protection agency and affected states as required under subsection 7.

(c) United States environmental protection agency and affected state notification. Within five working days of receipt of a complete permit modification application, the department shall notify the administrator of the United States environmental protection agency and affected states

of the requested permit modification. The department shall promptly send any notice required under paragraph 2 of subdivision b of subsection 7 to the administrator of the United States environmental protection agency.

(d) Timetable for issuance. The department may not issue a final permit modification until after the United States environmental protection agency forty-five-day review period or until the United States environmental protection agency has notified the department that the United States environmental protection agency will not object to issuance of the permit modification, whichever is first, although the department can approve the permit modification prior to that time. Within ninety days of the department's receipt of an application under minor permit modification procedures or fifteen days after the end of the administrator's forty-five-day review period under subdivision c of subsection 7, whichever is later, the department shall:

[1] Issue the permit modification as proposed;

[2] Deny the permit modification application;

[3] Determine that the requested modification does not meet the minor permit modification criteria and should be reviewed under the significant modification procedures; or

[4] Revise the draft permit modification and transmit to the administrator the new proposed permit modification as required by subdivision a of subsection 7.

(e) Source's ability to make change. A source may make the change proposed in its minor permit modification application only after it files such application and the department approves the change in writing. If the department allows the source to make the proposed change prior to taking action specified in items 1, 2, and 3 of subparagraph d, the source must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the source need not comply with the existing permit terms and conditions it seeks to modify. However, if the source fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it.

(f) The permit shield under subdivision f of subsection 5 shall not extend to minor permit modifications.

(2) Group processing of minor permit modifications. Consistent with this paragraph, the department may modify the procedure outlined in paragraph 1 to process groups of a source's applications for certain modifications eligible for minor permit modification processing.

(a) Criteria. Group processing of modifications may be used only for those permit modifications:

[1] That meet the criteria for minor permit modification procedures under item 1 of subparagraph a of paragraph 1 of subdivision e; and

[2] That collectively are below the threshold level which is ten percent of the emissions allowed by the permit for the emissions unit for which the change is requested, twenty percent of the applicable definition of major source in subsection 1, or five tons [4.54 metric tons] per year, whichever is least.

(b) Application. An application requesting the use of group processing procedures shall meet the requirements of subdivision c of subsection 4 and shall include the following:

[1] A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.

[2] The source's suggested draft permit.

[3] Certification by a responsible official, consistent with subdivision d of subsection 4, that the proposed modification meets the criteria for use of group processing procedures and a request that such procedures be used.

[4] A list of the source's other pending applications awaiting group processing, and a determination of whether the requested modification, aggregated with these other applications, equals or exceeds the threshold set under item 2 of subparagraph a of paragraph 2 of subdivision e.

[5] Certification, consistent with subdivision d of subsection 4, that the source has notified the United States environmental protection agency of the proposed modification. Such notification need only contain a brief description of the requested modification.

[6] Completed forms for the department to use to notify the administrator of the United States environmental protection agency and affected states as required under subsection 7.

(c) United States environmental protection agency and affected state notification. On a quarterly basis or within five business days of receipt of an application demonstrating that the aggregate of a source's pending applications equals or exceeds the threshold level set under item 2 of subparagraph a of paragraph 2 of subdivision e, whichever is earlier, the department shall meet its obligation under paragraph 1 of subdivision a of subsection 7 and paragraph 1 of subdivision b of subsection 7 to notify the administrator of the United States environmental protection agency and affected states of the requested permit modifications. The department shall send any notice required under paragraph 2 of subdivision b of subsection 7 to the administrator of the United States environmental protection agency.

(d) Timetable for issuance. The provisions of subparagraph d of paragraph 1 of subdivision e shall apply to modifications eligible for group processing, except that the department shall take one of the actions specified in items 1 through 4 of subparagraph d of paragraph 1 of subdivision e within one hundred eighty days of receipt of the application or fifteen days after the end of the administrator's forty-five-day review period under subdivision c of subsection 7, whichever is later.

(e) Source's ability to make change. The provisions of subparagraph e of paragraph 1 apply to modifications eligible for group processing.

(f) The permit shield under subdivision f of subsection 5 shall not extend to group processing of minor permit modifications.

(3) Significant modification procedures.

(a) Criteria. Significant modification procedures shall be used for applications requesting permit modifications that do not qualify as minor permit modifications or as administrative amendments. Every significant change in existing monitoring permit terms or conditions and every relaxation of reporting or recordkeeping permit terms or conditions shall be considered significant. Nothing herein shall be construed to preclude the permittee from making changes consistent with this subsection that would render existing permit compliance terms and conditions irrelevant.

(b) Significant permit modifications shall meet all requirements of this section, including those for applications, public participation, review by affected states, and review by the United States environmental protection agency, as they apply to permit issuance and permit renewal. The department shall complete review of significant permit modifications within nine months after receipt of a complete application.

f. Reopening for cause.

(1) Each issued permit shall include provisions specifying the conditions under which the permit will be reopened prior to the expiration of the permit. A permit shall be reopened and revised under any of the following circumstances:

(a) Additional applicable requirements under the Federal Clean Air Act become applicable to a major title V source with a remaining permit term of three or more years. Such a reopening shall be completed not later than eighteen months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended.

(b) Additional requirements, including excess emissions requirements, become applicable to an affected source under title IV of the Federal Clean Air Act or the regulations promulgated thereunder. Upon approval

by the administrator of the United States environmental protection agency, excess emissions offset plans shall be deemed to be incorporated into the permit.

(c) The department or the United States environmental protection agency determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

(d) The administrator of the United States environmental protection agency or the department determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

(2) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

(3) Reopenings under paragraph 1 shall not be initiated before a notice of such intent is provided to the title V source by the department at least thirty days in advance of the date that the permit is to be reopened, except that the department may provide a shorter time period in the case of an emergency.

g. Reopenings for cause by the United States environmental protection agency.

(1) If the administrator of the United States environmental protection agency finds that cause exists to terminate, modify, or revoke and reissue a permit pursuant to subdivision f, within ninety days after receipt of such notification, the department shall forward to the United States environmental protection agency a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

(2) The administrator of the United States environmental protection agency will review the proposed determination from the department within ninety days of receipt.

(3) The department shall have ninety days from receipt of the United States environmental protection agency objection to resolve any objection that the United States environmental protection agency makes and to terminate, modify, or revoke and reissue the permit in accordance with the administrator's objection.

(4) If the department fails to submit a proposed determination or fails to resolve any objection, the administrator of the United States environmental protection agency will terminate, modify, or revoke and reissue the permit after taking the following actions:

(a) Providing at least thirty days' notice to the permittee in writing of the reasons for any such action.

(b) Providing the permittee an opportunity for comment on the administrator's proposed action and an opportunity for a hearing.

h. Public participation. Except for modifications qualifying for minor permit modification procedures, all permit proceedings, including initial permit issuance, significant modifications, and renewals, shall be subject to procedures for public notice including offering an opportunity for public comment and a hearing on the draft permit. These procedures shall include the following:

- (1) Notice shall be given by publication in a newspaper of general circulation in the area where the source is located or in a state publication designed to give general public notice; to persons on a mailing list developed by the department, including those who request in writing to be on the list; and by other means if necessary to assure adequate notice to the affected public;
- (2) The notice shall identify the affected facility; the name and address of the permittee; the name and address of the department; the activity or activities involved in the permit action; the emissions change involved in any permit modification; the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, and all other materials available to the department that are relevant to the permit decision; a brief description of the comment procedures required by this subsection; and the time and place of any hearing that may be held, including a statement of procedures to request a hearing, unless a hearing has already been scheduled;
- (3) The department shall provide such notice and opportunity for participation by affected states as is provided for by subsection 7;
- (4) The department shall provide at least thirty days for public comment and shall give notice of any public hearing at least thirty days in advance of the hearing; and
- (5) The department shall keep a record of the commenters and also of the issues raised during the public participation process. These records shall be available to the public.

7. Permit review by the United States environmental protection agency and affected states.

a. Transmission of information to the administrator.

- (1) The department shall provide a copy of each permit application including any application for a permit modification (including the compliance plan), to the administrator of the United States environmental protection agency except that the applicant shall provide such information directly to the administrator of the United States environmental protection agency when directed to do so by the department. The department shall provide a copy of each proposed permit and each final title V permit to operate to the administrator of the United States environmental protection agency. To the extent practicable, the preceding information shall be provided in computer-readable format compatible with the United States environmental protection agency's national data base management system.

(2) The department may waive the requirements of paragraph 1 and paragraph 1 of subdivision b for any category of sources (including any class, type, or size within such category) other than major sources upon approval by the administrator of the United States environmental protection agency.

(3) The department shall keep these records for at least five years.

b. Review by affected states.

(1) The department shall give notice of each draft permit to any affected state on or before the time that the notice to the public under subdivision h of subsection 6 is given, except to the extent paragraphs 1 and 2 of subdivision e of subsection 6 require the timing of the notice to be different.

(2) As part of the submittal of the proposed permit to the administrator of the United States environmental protection agency (or as soon as possible after the submittal for minor permit modification procedures allowed under paragraphs 1 and 2 of subdivision e of subsection 6) the department shall notify the administrator of the United States environmental protection agency and any affected state in writing of any refusal by the department to accept all recommendations for the proposed permit that the affected state submitted during the public or affected state review period. The notice shall include the department's reasons for not accepting any such recommendation. The department is not required to accept recommendations that are not based on applicable requirements or the requirements of this section.

c. United States environmental protection agency objection. No permit for which an application must be transmitted to the administrator of the United States environmental protection agency under subdivision a shall be issued if the administrator of the United States environmental protection agency objects to its issuance in writing within forty-five days of receipt of the proposed permit and all necessary supporting information.

d. Public petitions to the administrator of the United States environmental protection agency. If the administrator of the United States environmental protection agency does not object in writing under subdivision c, any person may petition the administrator of the United States environmental protection agency within sixty days after the expiration of the administrator's forty-five-day review period to make such objection. Any such petition shall be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in subdivision h of subsection 6, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period. If the administrator of the United States environmental protection agency objects to the permit as a result of a petition filed under this subdivision, the department shall not issue the permit until the United States environmental protection agency's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the forty-five-day review period and prior to the United States environmental protection agency's objection. If the department has issued a permit prior to

receipt of the United States environmental protection agency's objection under this subdivision, the department may thereafter issue only a revised permit that satisfies the United States environmental protection agency's objection. In any case, the source will not be in violation of the requirement to have submitted a timely and complete application.

- e. Prohibition on default issuance. The department shall issue no title V permit to operate, including a permit renewal or modification, until affected states and the United States environmental protection agency have had an opportunity to review the proposed permit as required under this subsection.

8. Judicial review of title V permit to operate decisions.

- a. The applicant, any person who participated in the department's public participation process, and any other person who could obtain judicial review under North Dakota Century Code section 28-32-42 may obtain judicial review provided such appeal is filed in accordance with North Dakota Century Code section 28-32-42 within thirty days after notice of the final permit action.

- b. The department's failure to take final action on an application for a permit, permit renewal, or permit revision within the timeframes referenced in this section shall be appealable in accordance with North Dakota Century Code section 28-32-42 within thirty days after expiration of the applicable timeframes.

- c. In accordance with North Dakota Century Code chapter 28-32, the mechanisms outlined in this subsection shall be the exclusive means for judicial review of permit decisions referenced in this section.

- d. Solely for the purpose of obtaining judicial review in state court, final permit action shall include the failure of the department to take final action on an application for a permit, permit renewal, or permit revision within the timeframes referenced in this section.

- e. Failure to take final action within ninety days of receipt of an application requesting minor permit modification procedures (or one hundred eighty days for modifications subject to group processing requirements) shall be considered final action and subject to judicial review in state court.

9. **Enforcement.** The department may suspend, revoke, or terminate a permit for violations of this article, violation of any permit condition or for failure to respond to a notice of violation or any order issued pursuant to this article. A permit to operate which has been revoked or terminated pursuant to this article must be surrendered forthwith to the department. No person may operate or cause the operation of a source if the department denies, terminates, revokes, or suspends a permit to operate.

10. **Compliance assurance monitoring.** Except as noted below, title 40, Code of Federal Regulations, part 64 compliance assurance monitoring, as it exists on July 2, 2010, is incorporated by reference.

- a. "Administrator" means the department except for those duties that cannot be delegated by the United States environmental protection agency. For those duties that cannot be delegated, administrator means the department and the administrator of the United States environmental protection agency.

b. "Part 70 permit" means a title V permit to operate.

c. "Permitting authority" means the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09, 23.1-06-10; S.L. 2017, ch. 199, § 21

33.1-15-14-07. Source exclusions from title V permit to operate requirements.

1. **Purpose.** The purpose of this section is to clarify which sources are minor sources with respect to section 33.1-15-14-06. The owner or operator of any source that would be classified as a major source under section 33.1-15-14-06 and which is not specifically excluded by this section shall comply with the requirements of section 33.1-15-14-06.

2. **Definitions.** For purposes of this section:

a. "Bulk gasoline plant" means any bulk gasoline distribution facility that has a gasoline throughput less than or equal to twenty thousand gallons [75700 liters] per day and that receives gasoline by truck rather than by rail.

b. "Coatings" means coatings plus diluents plus cleanup solvents.

c. "Fountain solution additives" includes isopropyl alcohol, n-propyl alcohol, n-butanol, and alcohol substitutes.

d. "Hazardous air contaminant" means any air contaminant listed pursuant to subsection 112(b) of the Federal Clean Air Act.

e. "Refueling positions" means the number of vehicles that could be dispensing simultaneously at a gasoline service station.

3. **Applicability.**

a. The owner or operator of the following stationary sources is not required to obtain a title V permit to operate under section 33.1-15-14-06 if the conditions of this section are met:

(1) Gasoline service stations.

(2) Gasoline bulk plants.

(3) Coating sources.

(4) Printing, publishing, and packaging operations.

(5) Degreasers using volatile organic solvents.

(6) Hot mix asphalt plants.

b. Any facility obtaining coverage under this section must submit a notification in writing to the department within ninety days of publication of this section unless

specifically exempted from this requirement in the applicable subdivision of this section. The notification must contain the following information:

(1) Facility name, location, and nature of business.

(2) A list of all the sources of air contaminants at the facility.

(3) The condition of this section which is applicable to the facility.

(4) Total material usage, source capacity, or throughput for the previous month or twelve months at the facility, in accordance with the subdivision that is applicable to the facility.

(5) A signed statement accepting the throughput or usage limitation.

c. Complying with the conditions of this section does not exempt the owner or operator of a facility from the obligation to apply for and obtain a permit to construct or a minor source permit to operate unless specifically exempted in section 33.1-15-14-02 or 33.1-15-14-03.

d. The owner or operator of any facility listed in subdivision a which has potential emissions that would classify it as a major source even after the conditions of this section are met, or are not able to comply with the applicable conditions, shall obtain a title V permit to operate or a minor source permit to operate which limits the potential to emit of the source to a level below the major source threshold.

e. Complying with the conditions of this section does not relieve the owner or operator of a source of the responsibility to comply with any other applicable requirements of this article.

f. If the facility deviates from any condition, limit, or requirement of this section, a report must be submitted to the department within thirty days of the deviation containing the following information:

(1) The facility's name and location.

(2) Applicable condition, limit, or requirement for the facility for which a deviation occurred.

(3) A summary of the records showing the deviation, accompanied by an explanation of the deviation.

(4) A plan of action to prevent future occurrences of any deviation at the facility.

g. All records required by this section must be maintained for a period of five years from the last date of entry. The records must be available for inspection or submittal to the department upon request. If a facility is limited by a material usage, capacity, or throughput based on a twelve-month rolling period, a log must be updated monthly to include the previous twelve months' total material usage, capacity, or throughput.

4. Exclusion standards.

a. Gasoline service stations. The owner or operator of sources where gasoline dispensing operations account for more than ninety percent of all emissions from the facility is not required to obtain a title V permit to operate if the following conditions are met:

(1) No vapor recovery is used:

(a) The source's total sales of gasoline must not exceed three hundred eighty thousand gallons [1438300 liters] per month in any calendar month. To demonstrate compliance with this limit, monthly records of throughput must be maintained at the source.

(b) If the number of refueling positions is no more than seventeen at the source, then the source is exempt from formal application to the department under subdivision b of subsection 3.

(2) Stage I vapor recovery is used:

(a) The source's total sales of gasoline must not exceed six hundred thirty thousand gallons [2384800 liters] per month in any calendar year. To demonstrate compliance with this limit, monthly records of throughput must be maintained at the source.

(b) If the number of refueling positions is no more than twenty-nine at the source, then the source is exempt from formal application to the department under subdivision b of subsection 3.

b. Gasoline bulk plants. The owner or operator of gasoline bulk plants where gasoline loading and unloading operations account for more than ninety percent of all emissions from the source are covered by this subdivision. To demonstrate compliance with the twenty thousand gallons [75700 liters] per day of gasoline definition of a bulk plant, monthly records of throughput must be maintained at the source.

c. Coating sources.

(1) The owner or operator of sources where surface coating operations account for more than ninety percent of all hazardous air contaminant emissions from the facility is not required to obtain a title V permit to operate if the conditions in subparagraph a or b are met.

(a) The source's total usage of surface coatings must not exceed two hundred fifty gallons [946.25 liters] of coatings per month in any calendar month nor exceed three thousand gallons [11355 liters] of coatings per twelve-month period. The coatings are limited to six pounds per gallon [719 grams per liter] of any individual hazardous air contaminant. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The source's total hazardous air contaminant emissions shall not exceed ten tons per twelve-month period. Hazardous air contaminant emissions must be calculated by multiplying the surface coating material usage in gallons by the individual hazardous air contaminant

content in pounds per gallon. To demonstrate compliance with the emissions limitation, the emissions must be calculated on a monthly basis and recorded in a log. All records of material usage, hazardous air contaminant content, and emissions must be maintained at the facility.

(2) The owner or operator of an automobile refinishing shop where operations account for more than ninety percent of volatile organic compound emissions and hazardous air contaminant emissions is not required to obtain a title V permit to operate if the usage of coatings is less than two hundred fifty gallons [946.25 liters] per month or three thousand gallons [11355 liters] of coatings per twelve-month period. This item does not apply to facilities capable of refinishing vehicles other than automobiles or trucks. Sources are exempt from the notification requirements under subdivision b of subsection 3 if:

(a) The auto refinishing shop business is entirely, or almost entirely, for collision repairs and the business has two or fewer bays;

(b) Substantial portions of the auto refinishing shop business are devoted to repainting entire vehicles and the business only has one bay devoted to painting; or

(c) The auto refinishing shop business does not have the physical or operational capability to do more than fifty jobs per week.

d. Printing, publishing, and packaging operations.

(1) The owner or operator of facilities where sheetfed (nonheatset) offset lithography or nonheatset web offset lithography printing operations are conducted is not required to obtain a title V permit to operate if the conditions in subparagraphs a, b, and c are met.

(a) The facility must use less than fourteen thousand two hundred seventy-five gallons [54030 liters] of cleaning solvent and fountain solution additives in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The facility must use less than three thousand three hundred thirty-three gallons [12615 liters] of materials containing multiple hazardous air contaminants in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(c) The facility must use less than one thousand three hundred thirty-three gallons [5045 liters] of material containing any individual hazardous air contaminant in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(2) The owner or operator of facilities where heatset web offset lithography printing operations are conducted is not required to obtain a title V permit to operate if the conditions in subparagraphs a, b, and c are met.

(a) The facility must use less than one hundred thousand pounds [45.36 megagrams] of ink, cleaning solvent, and fountain solution additives in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The facility must use less than three thousand three hundred thirty-three gallons [12615 liters] of materials containing multiple hazardous air contaminants in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(c) The facility must use less than one thousand three hundred thirty-three gallons [5045 liters] of material containing any individual hazardous air contaminant in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(3) The owner or operator of facilities where screen printing operations are conducted is not required to obtain a title V permit to operate if the conditions in subparagraphs a, b, and c are met.

(a) The facility must use less than fourteen thousand two hundred seventy-five gallons [54030 liters] of the sum of solvent-based inks, cleaning solvents, adhesives, and coatings in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The facility must use less than three thousand three hundred thirty-three gallons [12615 liters] of materials containing multiple hazardous air contaminants in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(c) The facility must use less than one thousand three hundred thirty-three gallons [5045 liters] of material containing any individual hazardous air contaminant in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(4) The owner or operator of facilities, where flexography, or rotogravure printing operations with water-based or ultraviolet-cured inks, coatings, and adhesives are conducted, is not required to obtain a title V permit to operate if the conditions in subparagraphs a, b, and c are met.

(a) The facility must use less than four hundred thousand pounds [181 megagrams] of the sum of solvent-based inks, cleaning solvents, and adhesives in any twelve-month rolling period. To demonstrate

compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The facility must use less than three thousand three hundred thirty-three gallons [12615 liters] of materials containing multiple hazardous air contaminants in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(c) The facility must use less than one thousand three hundred thirty-three gallons [5045 liters] of material containing any individual hazardous air contaminant in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(5) The owner or operator of facilities where flexography or rotogravure printing operations with solvent inks are conducted is not required to obtain a title V permit to operate if the conditions in subparagraphs a, b, and c are met.

(a) The facility must use less than one hundred thousand pounds [45.36 megagrams] of the sum of ink, coatings, adhesives, dilution solvents, and cleaning solvents in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(b) The facility must use less than three thousand three hundred thirty-three gallons [12615 liters] of materials containing multiple hazardous air contaminants in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

(c) The facility must use less than one thousand three hundred thirty-three gallons [5045 liters] of material containing any individual hazardous air contaminant in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of material usage must be maintained at the facility.

e. Degreasers using volatile organic solvents. The owner or operator of facilities where degreasing operations account for more than ninety percent of all volatile organic compound emissions and hazardous air contaminant emissions from the facility is not required to obtain a title V permit to operate if the conditions in paragraph 1 or 2 are met.

(1) If non-halogenated solvents are used, the usage is limited to two thousand two hundred gallons [8327 liters] of any one solvent-containing material and five thousand four hundred gallons [20439 liters] of any combination of solvent-containing materials in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of solvent usage must be maintained at the facility.

(2) If halogenated solvents are used, including methyl chloroform, trichloroethane, and methylene chloride, the usage is limited to one thousand two hundred gallons [4542 liters] of any one solvent-containing

material and two thousand nine hundred gallons [10976 liters] of any combination of solvent-containing materials in any twelve-month rolling period. To demonstrate compliance with the usage limit, monthly records of solvent usage must be maintained at the facility.

- f. Hot mix asphalt plants. The owner or operator of facilities where hot mix asphalt production operations account for more than ninety percent of all emissions from the facility is not required to obtain a title V permit to operate if the amount of hot mix asphalt produced does not exceed two hundred fifty thousand tons [226757 metric tons] in any twelve-month rolling period. To demonstrate compliance with this limit, monthly records of hot mix asphalt produced must be maintained at the facility. Sources that are excluded under this subdivision must obtain a minor source permit to operate under section 33.1-15-14-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-15 **PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY**

Section

33.1-15-15-01 [Reserved]

33.1-15-15-01.1 Purpose

33.1-15-15-01.2 Scope

33.1-15-15-02 Reclassification

33.1-15-15-01. [Reserved]

33.1-15-15-01.1. Purpose.

The purpose of this chapter is to adopt by reference federal provisions for the prevention of significant deterioration program in North Dakota. The department will continue to implement the prevention of significant deterioration program as part of the state implementation plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-15-01.2. Scope.

The provisions of title 40, Code of Federal Regulations part 52, section 21, paragraphs (a)(2) through (e), (h) through (r), (v), (w), (aa), and (bb) as they exist on July 1, 2015, are incorporated by reference into this chapter. This includes revisions to the rules that were published as a final rule in the Federal Register by this date but had not been published in the Code of Federal Regulations yet. Any changes or additions to the provisions are listed below the affected paragraph.

For purposes of this chapter, administrator means the department except for those duties that cannot be delegated by the United States environmental protection agency. For those

duties listed below, or any others that cannot be delegated, administrator means the administrator of the United States environmental protection agency:

(b)(17) - Definition of federally enforceable.

(b)(37)(i) - Definition of repowering.

(b)(43) - Definition of prevention of significant deterioration.

(b)(48)(ii)(c) - Definition of baseline actual emissions.

(b)(50)(i) - Definition of regulated NSR pollutant.

(1)(2) - Air quality models.

(p)(2) - Consultation with the federal land manager.

For purposes of this chapter, permit or approval to construct means a permit to construct. The procedures for obtaining a permit to construct are specified in section 33.1-15-14-02 and this chapter. When there is a conflict in the requirements between this chapter and section 33.1-15-14-02, the requirements of this chapter shall apply.

For purposes of this chapter, the term "40 CFR 52.21" is replaced with "this chapter".

40 CFR 52.21(b)(1) The following is added:
For purposes of this definition, regulated NSR pollutant does not include greenhouse gases as defined in 40 CFR 86.1818-12(a).

40 CFR 52.21(b)(2) The following is added:
For purposes of this definition, regulated NSR pollutant does not include greenhouse gases as defined in 40 CFR 86.1818-12(a).

40 CFR 52.21(b)(2)(iii)(a) The following is deleted:
Routine maintenance, repair and replacement shall include, but not be limited to, any activity(s) that meets the requirements of the equipment replacement provisions contained in paragraph (cc).

40 CFR 52.21(b)(3)(iii)(a) The words "the administrator or other reviewing authority" are replaced with "the department or the administrator of the United States environmental protection agency".

40 CFR 52.21(b)(14) The following is added:
(v) The department shall provide a list of baseline dates for each contaminant for each baseline area.

40 CFR 52.21(b)(15) The following is added:
(iv) North Dakota is divided into two intrastate areas under section 107(d)(1)(D) or (E) of the Federal Clean Air Act [Pub. L. 95-95]: the Cass County portion of region no.130, the metropolitan

Fargo-Moorhead interstate air quality control region; and region no. 172, the North Dakota intrastate air quality control region (the remaining fifty-two counties).

40 CFR
52.21(23)(i)

The following is added:
Greenhouse gases: 75,000 tpy CO₂ equivalent.

40 CFR
52.21(b)(22)

The following is added:

Designating an application complete for purposes of permit processing does not preclude the department from requesting or accepting any additional information.

40 CFR
52.21(b)(29)

The following is added:

This term does not include effects on integral vistas.

40 CFR
52.21(b)(30)

The term section 51.100(s) of this chapter is deleted and replaced with "40 CFR 51.100(s)".

40 CFR
52.21(b)(43)

The paragraph is deleted in its entirety and replaced with the following:

Prevention of significant deterioration (PSD) program means a major source preconstruction permit program administered by the department that has been approved by the administrator of the United States environmental protection agency and incorporated into the state implementation plan pursuant to 40 CFR 51.166 to implement the requirements of that section. Any permit issued by the department under the program is a major NSR permit.

40 CFR
52.21(b)(48)(ii)

The following words are deleted: "by the administrator for a permit required under this section or".

40 CFR
52.21(b)(49)

The following words are deleted "administrator in subchapter C of this chapter" and replaced with the following:

Administrator of the United States environmental protection agency in title 40, Code of Federal Regulations, chapter I subchapter C.

40 CFR
52.21(b)(49)(i)

"§ 86.181-12(a) of this chapter" is deleted and replaced with: 40 CFR 86.1818-12(a).

40 CFR
52.21(b)(49)(ii)(
a)

"Table A-1 to subpart A of part 98 of this chapter" is deleted and replaced with the following: 40 CFR 98, subpart A, table A-1.

The following is deleted:

For purposes of this paragraph, prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of nonfossilized and biodegradable organic material originating from plants, animals, or micro-organisms (including products, byproducts, residues and waste from agriculture, forestry and related industries as well as the nonfossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of nonfossilized and biodegradable organic material).

40 CFR

This paragraph is deleted in its entirety and replaced with the following:

52.21(b)(50)(i)(c)

Nitrogen oxides are a precursor to PM_{2.5} in all attainment and unclassifiable areas.

40 CFR 52.21(b)(50)(i)(d)

This paragraph is deleted in its entirety and replaced with the following:

Volatile organic compounds are not a precursor to PM_{2.5} in any attainment or unclassifiable areas.

40 CFR 52.21(b)(51)

The paragraph is deleted in its entirety and replaced with the following:

Reviewing authority means the department.

40 CFR 52.21(b)(53)

This paragraph is deleted in its entirety and replaced with the following:

Lowest achievable emission rate (LAER) has the meaning given in 40 CFR 51.165(a)(1)(xiii) which is incorporated by reference.

40 CFR 52.21(b)(54)

This paragraph is deleted in its entirety and replaced with the following:

Reasonably available control technology (RACT) has the meaning given in 40 CFR 51.100(o) which is incorporated by reference.

40 CFR 52.21(b)(58)

This paragraph is deleted in its entirety.

40 CFR 52.21(d)

The paragraph is deleted and replaced with the following:

No concentration of a contaminant shall exceed:

- (1) The concentration permitted under the national primary and secondary ambient air quality standards.
- (2) The concentration permitted by the ambient air quality standards in chapter 33.1-15-02.

40 CFR 52.21(e)

The following is added:

- (5) The class I areas in North Dakota are the Theodore Roosevelt National Park - north and south units and the Theodore Roosevelt Elkhorn Ranch Site in Billings County - and the Lostwood National Wilderness Area in Burke County.

40 CFR 52.21(h)

The paragraph is deleted and replaced with the following:

The stack height of any source subject to this chapter must meet the requirements of chapter 33.1-15-18.

40 CFR 52.21(i)

The following subparagraphs are added:

- (11) The class I area increment limitations of the Theodore Roosevelt Elkhorn Ranch Site of the Theodore Roosevelt National Park shall apply to sources or modifications for which complete applications were filed after July 1, 1982. The impact of emissions from sources or modifications for which permits under this chapter have been issued or complete applications have already been filed will be counted against the increments after July 1, 1982.
- (12) Provided that all necessary requirements of this article have been met, permits will be issued on a first-come, first-served basis as determined by the completion date of the applications.

40 CFR
52.21(k)(1)

This subparagraph is deleted and replaced with the following:

- (1) Any national ambient air quality standard or any standard in chapter 33.1-15-02.

40 CFR
52.21(l)(1)

This subparagraph is deleted and replaced with the following:

All estimates of ambient concentrations required under this chapter shall be based on applicable air quality models, technical data bases (including quality assured air quality monitoring results), and other requirements specified in appendix w of 40 CFR 51 ("guideline on air quality models" as it exists on January 1, 2012) as supplemented by department guidance. Technical inputs for these models shall be based upon credible technical data approved in advance by the department. In making such determinations, the department shall review such technical data to determine whether it is representative of actual source, meteorological, topographical, or local air quality circumstances.

40 CFR
52.21(m)(3)

"Appendix B to part 58 of this chapter" is replaced with 40 CFR 58, appendix B.

40 CFR
52.21(p)(6)

"paragraph (q)(4)" is replaced with "paragraph (p)(4)" and "(q)(7)" is replaced with "(p)(7)".

40 CFR
52.21(p)(7)

"paragraph (q)(7)" is replaced with "paragraph (p)(7)".

40 CFR
52.21(p)(8)

"paragraphs (q)(5) or (6)" is replaced with "paragraphs (p)(5) or (6)".

40 CFR
52.21(p)

The following is added:

- (9) Notice to the United States environmental protection agency. The department shall transmit to the administrator of the United States environmental protection agency through the region VIII regional administrator a copy of each permit application relating to a major stationary source or major modification received by the department and provide notice to the administrator of every action related to the consideration of such permit.

40 CFR
52.21(q)

This paragraph is deleted and replaced with the following:

q. Public participation.

-
- (1) Within thirty days after receipt of an application to construct a source or modification subject to this chapter, or any addition to such application, the department shall advise the applicant as to the completeness of the application or of any deficiency in the application or information submitted. In the event of such a deficiency, the date of receipt of the application, for the purpose of this chapter, shall be the date on which all required information to form a complete application is received by the department.
-
- (2) With respect to a completed application, the department shall:
-
- (a) Within one year after receipt, make a preliminary determination whether the source should be approved, approved with conditions, or disapproved pursuant to the requirements of this chapter.
-
- (b) Make available, in at least one location in each region in which the proposed source or modification would be constructed or on the department's website, a copy of all materials submitted by the applicant, a copy of the department's preliminary determination, and a copy or summary of other materials, if any, considered by the department in making a preliminary determination.
-
- (c) Notify the public, by prominent advertisement in newspapers of general circulation in each region in which the proposed source or modification would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and the opportunity for comment at a public hearing as well as written public comment on the information submitted by the owner or operator and the department's preliminary determination on the approvability of the source. The department shall allow at least thirty days for public comment.
-
- (d) Send a copy of the notice required in subparagraph c to the applicant, the United States environmental protection agency administrator, and to officials and agencies having cognizance over the location where the source or modification will be situated as follows: the chief executive of the city and county where the source or modification would be located; any comprehensive regional land use planning agency; and any state, federal land manager, or Indian governing body whose lands may be significantly affected by emissions from the source or modification.
-
- (e) Hold a public hearing whenever, on the basis of written requests, a significant degree of public interest exists or at its discretion when issues involved in the permit decision need to be clarified. A public hearing would be held during the public comment period for interested persons, including representatives of the United States environmental protection agency administrator, to appear and submit written or oral comments on the air quality impact of the source or modification, alternatives to the source or modification, the control technology required, and other appropriate considerations.
-
- (f) Consider all public comments submitted in writing within a time specified in the public notice required in subparagraph c and all

comments received at any public hearing conducted pursuant to subparagraph e in making its final decision on the approvability of the application. No later than thirty days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The department may extend the time to respond to comments based on a written request by the applicant. The department shall consider the applicant's response in making its final decision. All comments must be made available for public inspection in the same locations where the department made available preconstruction information relating to the source or modification.

(g) Make a final determination whether the source should be approved, approved with conditions, or disapproved pursuant to the requirements of this chapter.

(h) Notify the applicant in writing of the department's final determination. The notification must be made available for public inspection in the same locations where the department made available preconstruction information and public comments relating to the source or modification.

40 CFR 52.21(r)(2)

The following is added:

In cases of major construction projects involving long lead times and substantial financial commitments, the department may provide by a condition to the permit to construct a time period greater than eighteen months when such time extension is supported by sufficient documentation by the applicant.

40 CFR 52.21(v)(1)

This subparagraph is deleted and replaced with the following:

(1) An owner or operator of any proposed major stationary source or major modification may request the department to approve a system of innovative control technology.

40 CFR
52.21(v)(2)(iv)(a)

This subitem is deleted and replaced with the following:

(a) Cause or contribute to a violation of an applicable national ambient air quality standard or any ambient air quality standard in chapter 33.1-15-02; or

40 CFR 52.21(w)(1)

This subparagraph is deleted and replaced with the following:

(1) Any permit issued under this chapter or a prior version of this chapter shall remain in effect, unless and until it expires under 40 CFR 52.21(r) or is rescinded.

40 CFR 52.21(aa)(15)

This paragraph is deleted in its entirety

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-15-02. Reclassification.

1. **Reclassification of areas.** All areas (except as otherwise provided under 40 CFR 52.21(e)) must be designated either class I, class II, or class III. Any designation other than class II is subject to the redesignation procedures of this section. Redesignation (except as otherwise precluded by 40 CFR 52.21(e)) is subject to approval by the administrator of the United States environmental protection agency.

a. Reclassification by petition.

(1) Filing of petition. After twenty percent of the qualified electors in any county, as determined by the vote cast for the office of governor at the last preceding gubernatorial election, shall petition the department to reclassify any area within such county (except as precluded by 40 CFR 52.21(e)) to class I, class II, or class III, the department shall hold a hearing and take such other action as specified in subsection 3. The department shall reclassify the area proposed in the petition for reclassification only if such reclassification is substantially supported by the hearing record.

(2) Contents of petition. The petition to reclassify any area to either class I, class II, or class III must contain a legal description of the area which the petition is to affect; an explanation of the meaning and purpose of the petition and reclassification; a statement to the effect that those persons signing the petition desire the described area to be reclassified to either class I, class II, or class III and such statement must specify which class; a list of those persons or person circulating such petition, which persons must be designated "Committee of Petitioners"; an affidavit to be attached to each petition and sworn to under oath before a notary public by the person circulating each petition attesting to the fact that the person circulated such petition and that each of the signatures to such petition is the genuine signature of the person whose name it purports to be, and that each such person is a qualified elector in the county in which the petition was circulated; all petitions' signatures must be numbered and dated by month, day, and year, and the name must be written with residence address and post-office address including the county of residence followed by state of North Dakota.

b. Reclassification upon department's own motion. At such time as the department may determine, it may hold a public hearing and take such other action as specified in subsection 2 in order to reclassify any area of this state (except as precluded by 40 CFR 52.21(e)) to class I, class II, or class III. The department shall reclassify the area proposed for reclassification only if such reclassification is substantially supported by the hearing record.

2. Procedures for reclassification.

a. Except as precluded by 40 CFR 52.21(e), the department may reclassify any area of this state, including any federally owned lands, but excluding lands within the exterior boundaries of any Indian reservations, to either class I or class II pursuant to subdivisions a and b of subsection 1, provided that:

- (1) At least one public hearing is held in or near the area affected and this public hearing is held in accordance with the procedures established in subsection 3.
- (2) Other states, Indian governing bodies, and federal land managers whose lands may be affected by the proposed redesignation are notified at least thirty days prior to the public hearing.
- (3) A discussion of the reasons for the proposed redesignation including a satisfactory description and analysis of the health, environmental, economic, social, and energy effects of the proposed redesignation is prepared and made available for public inspection at least thirty days prior to the hearing and the notice announcing the hearing contains appropriate notification of the availability of such discussion.
- (4) Prior to the issuance of notice respecting the redesignation of any area that includes any federal lands, the state shall provide written notice to the appropriate federal land manager and afford adequate opportunity (but not in excess of sixty days) to confer with the state respecting the redesignation and to submit written comments and recommendations with respect to such redesignation. In redesignating any area with respect to which any federal land manager has submitted written comments and recommendations, the state shall publish a list of any inconsistency between such redesignation and such comments and recommendations and an explanation of such inconsistency (together with the reasons for making such redesignation against the recommendation of the federal land manager).
- (5) The proposed redesignation is based on the record of the state's hearing, which must reflect the basis for the proposed redesignation, including consideration of:
 - (a) Growth anticipated in the area.
 - (b) The social, environmental, health, energy, and economic effects of such redesignation upon the area being proposed for redesignation and upon other areas and states.
 - (c) Any impacts of such proposed redesignation upon regional or national interests. Anticipated growth shall include growth resulting both directly and indirectly from proposed development.
- (6) The redesignation is proposed after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.
 - b. Except as precluded by 40 CFR 52.21(e), the department may reclassify any area of this state, including any federally owned lands, but excluding lands within the exterior boundaries of any Indian reservations, to class III if:
 - (1) Such redesignation would meet the requirements of subdivision a.
 - (2) Such redesignation has been specifically approved by the governor of the state, after consultation with the appropriate committees of the legislative

assembly if it is in session or with the leadership of the legislative assembly if it is not in session, and if general purpose units of local government representing a majority of the residents of the area so redesignated enact legislation or pass resolutions concurring the state's redesignation.

(3) Such redesignation will not cause, or contribute to, a concentration of any air contaminant which would exceed any maximum allowable increase permitted under the classification of any other area, or any applicable ambient air quality standard.

(4) Prior to any public hearing on redesignation of any area, there must be available, insofar as is practicable for public inspection, any specific plans for any new major stationary source or major modification which may be permitted to be constructed and operated only if the area in question is redesignated as class III.

3. Reclassification hearings.

a. Any hearing required by subsection 2 shall be held only after reasonable notice, which shall be considered to include, at least thirty days prior to the date of such hearing:

(1) Notice given to the public by prominent advertisement in the region affected announcing the date, time, and place of such hearing.

(2) Availability of each proposed plan or revision for public inspection in at least one location in each region to which it will apply, and the availability of each compliance schedule for public inspection in at least one location in the region in which the affected source is located.

(3) Notification to the administrator of the United States environmental protection agency (through the appropriate regional office).

(4) Notification to each local air pollution control agency in each region to which the plan, schedule, or revision will apply.

(5) In the case of an interstate region, notification to any other states included, in whole or in part, in the region.

(6) Notification to any states, Indian governing bodies, and federal land managers whose lands may be affected by the proposed redesignation.

b. The department shall prepare and retain for inspection a record of each hearing. The record must contain, as a minimum, a list of witnesses together with the text of each presentation.

c. Any hearing held pursuant to the provisions of this subsection must be held only for the purpose of considering such reclassification as has been noticed under the provisions of subsection 2, and consideration of reclassification to other classes not so noticed shall not be allowed.

d. Any hearing held pursuant to these provisions may be continued for such purposes and for such periods of time as the department may determine.

4. **Time limitation.** Notwithstanding any other regulation herein, the department shall rule upon any proposed reclassification within eighteen months of the official public notification of such proposed redesignation by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-16 **RESTRICTION OF ODOROUS AIR CONTAMINANTS**

Section

33.1-15-16-01 General Provisions

33.1-15-16-02 Emissions of Odorous Substances Restricted

33.1-15-16-02.1 Emissions of Hydrogen Sulfide Restricted

33.1-15-16-03 [Reserved]

33.1-15-16-04 Method of Measurement

33.1-15-16-04.1 Regulation Restriction

33.1-15-16-01. General provisions.

1. An odor will be considered objectionable when a department-certified inspector or at least thirty percent of a randomly selected group of persons, or an odor panel exposed to the odor would deem that odor objectionable if the odor were present in their place of residence.
2. An "odor concentration unit" is defined as a volume of odor-free air mixed with an equal volume of odorous air such that the combination would be at the threshold level of the olfactory senses. The intensity of an odor is determined by the ratio of the volume of odor-free air that must be mixed with a standard volume of odorous air so that a department-certified inspector or at least fifty percent of an odor panel can still detect the odor in the diluted mixture.
3. A department-certified inspector is any person designated by the department who has successfully completed a department-sponsored odor certification course and demonstrated the ability to distinguish various odorous samples and concentrations. In the case of hydrogen sulfide (H₂S) complaints, the inspector will be competent with the hydrogen sulfide (H₂S) detection equipment being used.
4. An odor panel, if used, must consist of a minimum of five persons who have successfully completed a department-sponsored odor certification course and demonstrated the ability to distinguish various odorous samples and concentrations.
5. Odor emissions in excess of the limits stated in section 33.1-15-16-02 or 33.1-15-16-02.1, or both, will be addressed on a complaint basis.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-16-02. Emissions of odorous substances restricted.

1. In areas located within a city or the area over which a city has exercised extraterritorial zoning as defined in North Dakota Century Code section 40-47-01.1, a person may not discharge into the ambient air any objectionable odorous air contaminant that measures seven odor concentration units or higher outside the property boundary where the discharge is occurring. If an agricultural operation as defined by North Dakota Century Code section 42-04-01 has been in operation for more than one year, as provided by North Dakota Century Code section 42-04-02, and the business or residence making the odor complaint was built or established after the agricultural operation was established, the measurement for compliance with the seven odor concentration units standard must be taken within one hundred feet [30.48 meters] of the subsequently established residence, church, school, business, or public building making the complaint rather than at the property boundary of the agricultural operation. The measurement may not be taken within five hundred feet [.15 kilometer] of the property boundary of the agricultural operation.
2. In areas located outside a city or outside the area over which a city has exercised extraterritorial zoning as defined in North Dakota Century Code section 40-47-01.1, a person may not discharge into the ambient air any objectionable odorous air contaminant that causes odors that measure seven odor concentration units or higher as measured at any of the following locations:
 - a. Within one hundred feet [30.48 meters] of any residence, church, school, business, or public building, or within a campground or public park. An odor measurement may not be taken at the residence of the owner or operator of the source of the odor, or at any residence, church, school, business, or public building, or within a campground or public park, that is built or established within one-half mile [.80 kilometer] of the source of the odor after the source of the odor has been built or established;
 - b. At any point located beyond one-half mile [.80 kilometer] from the source of the odor, except for property owned by the owner or operator of the source of the odor, or over which the owner or operator of the source of the odor has purchased an odor easement; or
 - c. If a county or township has zoned or established a setback distance for an animal feeding operation which is greater than one-half mile [.80 kilometer] under either North Dakota Century Code section 11-33-02 or 58-03-11, or if the setback distance under subsection 7 of North Dakota Century Code section 23.1-06-15 is greater than one-half mile [.80 kilometer], measurements for compliance with the seven odor concentration units standard must be taken at the setback distance rather than one-half mile [.80 kilometer] from the facility under subdivision b, except for any residence, church, school, business, public building, park, or campground within the setback distance which was built or established before the animal feeding operation was established, unless the animal feeding operation has obtained an odor easement from the preexisting facility.
3. A person is exempt from this section while spreading or applying animal manure or other recycled agricultural material to land in accordance with a nutrient management plan approved by the department. A person is exempt from this section while spreading or applying animal manure or other recycled agricultural material to land owned or

leased by that person in accordance with rules adopted by the department, including articles 33.1-16 and 33.1-20. An owner or operator of a lagoon or waste storage pond permitted by the department is exempt from this section in the spring from the time when the cover of the permitted lagoon or pond begins to melt until fourteen days after all the ice cover on the lagoon or pond has completely melted. Notwithstanding these exemptions, all persons shall manage their property and systems to minimize the impact of odors on their neighbors.

4. This section does not apply to chemical compounds that can be individually measured by instruments, other than a scentometer, that have been designed and proven to measure the individual chemical or chemical compound, such as hydrogen sulfide, to a reasonable degree of scientific certainty, and for which the department has established a specific limitation by rule.

5. For purposes of this section, a public park is a park established by the federal government, the state, or a political subdivision of the state in the manner prescribed by law. For purposes of this section, a campground is a public or private area of land used exclusively for camping and open to the public for a fee on a regular or seasonal basis.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-16-02.1. Emissions of hydrogen sulfide restricted.

No person may discharge into the ambient air hydrogen sulfide (H₂S) in concentrations that would be objectionable on land owned or leased by the complainant or in areas normally accessed by the general public. For the purpose of complaint resolution under this section, two samples with concentrations greater than 0.05 parts per million (50 parts per billion) sampled at least fifteen minutes apart within a two-hour period and measured in accordance with section 33.1-15-16-04 constitute a violation.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-16-03. [Reserved]

33.1-15-16-04. Method of measurement.

An odor measurement may be taken only with a properly maintained scentometer, by an odor panel, or by another instrument or method approved by the department, and only by inspectors certified by the department who have successfully completed a department-sponsored odor certification course and demonstrated the ability to distinguish various odor samples and concentrations. If a certified inspector measures a violation of this chapter, the department may send a certified letter of apparent noncompliance to the person causing the apparent violation and may negotiate with the owner or operator for the establishment of an odor management plan and best management practices to address the apparent violation. The department shall give the owner or operator at least fifteen days to implement the odor management plan. If the odor problem persists, the department may proceed with an enforcement action provided at least two certified inspectors at the same time each measure a violation and then confirm the violation by a second odor measurement taken

by each certified inspector, at least fifteen minutes, but no more than two hours, after the first measurement. In the case of hydrogen sulfide (H₂S) emissions, an ambient air analyzer designed for monitoring hydrogen sulfide (H₂S) must be the method used for determining the concentrations of emissions at the point of measurement, or other instrumental methods as approved by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-16-04.1. Regulation restriction.

Compliance with the provisions of this chapter does not operate as a defense to any legal action which is based upon the theory of public or private nuisance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-17 **RESTRICTION OF FUGITIVE EMISSIONS**

Section

33.1-15-17-01 General Provisions - Applicability and Designation of Affected Facilities

33.1-15-17-02 Restriction of Fugitive Particulate Emissions

33.1-15-17-03 Reasonable Precautions for Abating and Preventing Fugitive Particulate Emissions

33.1-15-17-04 Restriction of Fugitive Gaseous Emissions

33.1-15-17-01. General provisions - Applicability and designation of affected facilities.

1. The provisions of this chapter apply to the owner or operator of any source of fugitive emissions whatsoever.
2. No person shall cause or permit fugitive emissions from any source whatsoever, including a building, its appurtenances, or a road, to be used, constructed, altered, repaired, or demolished; or activities such as loading, unloading, storing, handling, or transporting of materials without taking reasonable precautions to prevent such emissions from causing air pollution as defined in section 33.1-15-01-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-17-02. Restriction of fugitive particulate emissions.

No person shall emit or cause to be emitted into the ambient air from any source of fugitive emissions as specified in section 33.1-15-17-01 any particulate matter which:

1. [Reserved]
2. Exceed the ambient air quality standards of chapter 33.1-15-02 at or beyond the property line of the source.

3. Exceed the prevention of significant deterioration of air quality increments of chapter 33.1-15-15 at or beyond the property line of the source for sources subject to chapter 33.1-15-15.
4. Exceed the restrictions on the emission of visible air contaminants of chapter 33.1-15-03, at or beyond the property line of the source, except as provided in section 33.1-15-03-04.
5. Would have an adverse impact on visibility, as defined in chapter 33.1-15-19, on any class I federal area.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-17-03. Reasonable precautions for abating and preventing fugitive particulate emissions.

1. Unpaved roads and unpaved parking areas. Abatement and preventive measures include but shall not be limited to frequent watering, addition of dust palliatives, detouring, paving, closure, speed control, or other means such as surface treatment with penetration chemicals (ligninsulfonates, oil, water, cutbacks, etc.) or methods of equal or greater effectiveness in reducing the air contamination produced.
2. Demolition, wrecking and explosive detonation activities; earth and construction material moving, mining, and excavation activities.
 - a. Abatement and preventive fugitive particulate control measures include, but are not limited to:
 - (1) Wetting down, including prewatering.
 - (2) Landscaping and replanting with native vegetation.
 - (3) Covering, shielding or enclosing the area.
 - (4) Paving, temporary or permanent.
 - (5) Treating, the use of dust palliatives and chemical stabilization.
 - (6) Detouring.
 - (7) Restricting the speed of vehicles on sites.
 - (8) Preventing the deposit of dirt and mud on improved streets and roads.
 - (9) Minimizing topsoil disturbance and reclaiming as soon as possible.
 - b. Sequential blasting be employed whenever or wherever feasible to reduce the amounts of particulate matter.
 - c. Such dust control strategies as revegetation, delay of topsoil disturbance until necessary, or surface compaction and sealing, be applied.

- d. Haulage equipment be washed or wetted down, treated, or covered when necessary to minimize the amount of dust becoming airborne in transit and in loading.
- e. Stockpile of materials be treated to prevent blowing or the material be contained in silos or other suitable enclosures.
- f. Waste disposal sites be so operated and constructed as to prevent particulate matter from becoming airborne.
- g. All conveyors, transfer points, crushers, screens, and dryers be so constructed, protected, or treated as to prevent particulate matter from becoming airborne.
- h. These measures also be used during periods when actual construction work is not being conducted, such as on weekends and holidays.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-17-04. Restriction of fugitive gaseous emissions.

No person shall emit or cause to be emitted into the ambient air from any source of fugitive emissions as specified in section 33.1-15-17-01 any gases which:

1. Exceed the ambient air quality standards of chapter 33.1-15-02 at or beyond the property line of the source.
2. Exceed the prevention of significant deterioration of air quality increments of chapter 33.1-15-15 at or beyond the property line of the source for sources subject to chapter 33.1-15-15.
3. Exceed the emission restrictions for odorous substances of chapter 33.1-15-16 at or beyond the property line of the source.
4. Exceed the restrictions on the emission of visible air contaminants of chapter 33.1-15-03 at or beyond the property line of the source.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-18 **STACK HEIGHTS**

Section

33.1-15-18-01 General Provisions

33.1-15-18-02 Good Engineering Practice Demonstrations

33.1-15-18-03 Exemptions

33.1-15-18-01. General provisions.

1. The degree of emission limitation required of any source for control of any air contaminant must not be affected by so much of any source's stack height that

exceeds good engineering practice or by any other dispersion technique, except as provided in section 33.1-15-18-03.

2. Definitions. As used in this chapter, all terms not defined herein shall have the meaning given them in section 33.1-15-01-04 or in North Dakota Century Code chapter 23.1-06.

a. "A stack in existence" means that the owner or operator had (1) begun, or caused to begin, a continuous program of physical onsite construction of the stack; or (2) entered into binding agreements or contractual obligations, which could not be canceled or modified without substantial loss to the owner or operator, to undertake a program of construction of the stack to be completed in a reasonable time.

b. (1) "Dispersion technique" means any technique which attempts to affect the concentration of a pollutant in the ambient air by:

(a) Using that portion of a stack which exceeds good engineering practice stack height;

(b) Varying the rate of emission of a pollutant according to atmospheric conditions or ambient concentrations of that pollutant; or

(c) Increasing final exhaust gas plume rise by manipulating source process parameters, exhaust gas parameters, stack parameters, or combining exhaust gases from several existing stacks into one stack; or other selective handling of exhaust gas streams so as to increase the exhaust gas plume rise.

(2) The preceding sentence does not include:

(a) The reheating of a gas stream, following use of a pollution control system, for the purpose of returning the gas to the temperature at which it was originally discharged from the facility generating the gas stream;

(b) The merging of exhaust gas streams where:

[1] The source owner or operator demonstrates that the facility was originally designed and constructed with such merged gas streams;

[2] After July 8, 1985, such merging is part of a change in operation at the facility that includes the installation of pollution controls and is accompanied by a net reduction in the allowable emissions of a pollutant. This exclusion from the definition of "dispersion techniques" shall apply only to the emission limitation for the pollutant affected by such change in operation; or

[3] Before July 8, 1985, such merging was part of a change in operation at the facility that included the installation of emissions control equipment or was carried out for sound economic or engineering reasons. Where there was an increase in the emission limitation or, in the event that no emission limitation was in existence prior to the merging, an increase in the quantity of

pollutants actually emitted prior to the merging, the reviewing agency shall presume that merging was significantly motivated by an intent to gain emissions credit for greater dispersion. Absent a demonstration by the source owner or operator that merging was not significantly motivated by such intent, the reviewing agency shall deny credit for the effects of such merging in calculating the allowable emissions for the source.

(c) Smoke management in prescribed agricultural or silvicultural burning programs;

(d) Episodic restrictions on residential woodburning and open burning; or

(e) Techniques under subparagraph c of paragraph 1 which increase final exhaust gas plume rise where the resulting allowable emissions of sulfur dioxide from the facility do not exceed five thousand tons per year.

c. "Excessive concentration" is defined for the purpose of determining good engineering practice stack height under paragraph 3 of subdivision d and means:

(1) For sources seeking credit for stack height exceeding that established under paragraph 2 of subdivision d, a maximum ground-level concentration due to emissions from a stack due in whole or in part to downwash, wakes, and eddy effects produced by nearby structures or nearby terrain features which individually is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and which contributes to a total concentration due to emissions from all sources that is greater than an ambient air quality standard. For sources subject to chapter 33.1-15-15, prevention of significant deterioration of air quality, an excessive concentration alternatively means a maximum ground-level concentration due to emissions from a stack due in whole or in part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which individually is at least forty percent in excess of the maximum concentration experienced in the absence of such downwash, wakes, or eddy effects and greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this part must be prescribed by the new source performance standard that is applicable to the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where such demonstrations are approved by the department, an alternative emission rate must be established in consultation with the source owner or operator;

(2) For sources seeking credit after October 11, 1983, for increases in existing stack heights up to the heights established under paragraph 2 of subdivision d, either (i) a maximum ground-level concentration due in whole or part to downwash, wakes, or eddy effects as provided in paragraph 1, except that the emission rate specified by the department (or, in the absence of such a limit, the actual emission rate) shall be used; or (ii) the actual presence of a local nuisance caused by the existing stack, as determined by the department; and

(3) For sources seeking credit after January 12, 1979, for a stack height determined under paragraph 2 of subdivision d where the department requires the use of a field study or fluid model to verify good engineering practice stack height, for sources seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers, and for sources seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not adequately represented by the equations in paragraph 2 of subdivision d, a maximum ground-level concentration due in whole or in part to downwash, wakes, or eddy effects that is at least forty percent in excess of the maximum concentration experience in the absence of such downwash, wakes, or eddy effects.

d. "Good engineering practice" (GEP) stack height means the greater of:

(1) Sixty-five meters [213.25 feet], measured from the ground-level elevation at the base of the stack;

(2) (a) For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals required by article 33.1-15, air pollution control,

$H_g = 2.5H$, provided the owner or operator produces evidence that this equation was actually relied on in establishing an emission limitation.

(b) For all other stacks,

$H_g = H + 1.5L$,

where:

H_g = good engineering practice stack height, measured from the ground-level elevation at the base of the stack,

H = height of nearby structures measured from the ground-level elevation at the base of the stack,

L = lesser dimension, height or projected width, of nearby structures, provided that the department may require the use of a field study or fluid model to verify good engineering practice stack height for the source; or

(3) The height demonstrated by a fluid model or a field study approved by the environmental protection agency, state or local control agency, which ensures that the emissions from a stack do not result in excessive concentrations of any air contaminant as a result of atmospheric downwash, wakes, or eddy effects created by the source itself, nearby structures or nearby terrain features.

e. "Nearby" as used in subdivision d is defined for a specific structure or terrain feature and:

(1) For purposes of applying the formulae provided in paragraph 2 of subdivision d means that distance up to five times the lesser of the height or

the width dimension of a structure, but not greater than 0.8 kilometers [1/2 mile]; and

(2) For conducting demonstrations under paragraph 3 of subdivision d means not greater than 0.8 kilometers [1/2 mile], except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to ten times the maximum height (H_i) of the feature not to exceed two miles [3.22 kilometers] if such feature achieves a height (H_i) 0.8 kilometers [1/2 mile] from the stack that is at least forty percent of the good engineering practice stack height determined by the formulae provided in subparagraph b of paragraph 2 of subdivision d or twenty-six meters [85.30 feet], whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

f. "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct but not including flares.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-18-02. Good engineering practice demonstrations.

Before a new or revised emission limitation is approved that is based on a good engineering practice stack height that exceeds the height allowed by paragraph a or b of subdivision d of subsection 2 of section 33.1-15-18-01, the department shall notify the public of the availability of the demonstration study and must provide opportunity for public hearing on it. In no event may the department prohibit any increase in stack height or restrict the stack height of any source.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-18-03. Exemptions.

The provisions of this chapter do not apply to stack heights in existence, or dispersion techniques implemented on or before December 31, 1970, except where pollutants are being emitted from such stacks or using such dispersion techniques by sources which were constructed, or reconstructed, or for which major modifications, were carried out after December 31, 1970.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-19 VISIBILITY PROTECTION

Section

33.1-15-19-01 General Provisions

33.1-15-19-02 Review of New Major Stationary Sources and Major Modifications

33.1-15-19-01. General provisions.

1. **Applicability.** The provisions of this chapter apply to the owner or operator of a major stationary source or major modification, as defined in section 33.1-15-15-01, whose construction or modification is commenced after August 12, 1985. The standards shall be applied in conjunction with the procedures set forth in chapters 33.1-15-12, 33.1-15-14, and 33.1-15-15.
2. **Definitions.** As used in this chapter, all terms not defined herein shall have the meaning given them in section 33.1-15-01-04, 33.1-15-12-01, or 33.1-15-15-01 or in North Dakota Century Code chapter 23.1-06.
 - a. "Adverse impact on visibility" means visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the federal class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of visibility impairment, and how these factors correlate with times of visitor use of the federal class I area, and the frequency and timing of natural conditions that reduce visibility.
 - b. "Natural conditions" include naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.
 - c. "Visibility impairment" means any humanly perceptible change in visual range, contrast, or coloration from that which would have existed under natural conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-19-02. Review of new major stationary sources and major modifications.

1. **Visibility impact analysis.** The owner or operator of a major stationary source or major modification, subject to subsection 1 of section 33.1-15-19-01, shall demonstrate to the department that the actual emissions from the major stationary source or major modification, including fugitive emissions, will not cause or contribute to adverse impact on visibility within any federal class I area. The owner or operator of a proposed major stationary source or major modification shall submit all information necessary to support any analysis or determination made. The owner or operator of a proposed major stationary source or major modification, subject to the requirements of this subsection, shall provide a visibility impact analysis of the visibility impact likely to occur as a result of general commercial, residential, industrial, and other growth associated with the source or major modification.
2. **Visibility models.** All estimates of visibility impact required under this section must be based on those models contained in "Workbook for Estimating Visibility Impairment" (EPA-450/4-80-031, November 1980). Equivalent models may be used subject to prior approval by the department.

3. **Notification of permit application.** The department shall provide written notice of any permit application for a proposed major stationary source or major modification, the emissions from which may affect a class I area, to the federal land manager and the federal official charged with direct responsibility for management of any lands within any such area. Such notification must include a copy of all information relevant to the permit application and must be given within thirty days of receipt and at least sixty days prior to any public hearing on the application for a permit to construct. Such notification must include an analysis of the proposed source's anticipated impacts on visibility in the federal class I area. The department shall also provide the federal land manager and such federal officials with a copy of the preliminary determination of anticipated impacts on visibility in any federal class I area, and shall make available to them any materials used in making that determination, promptly after the department makes such determination. The department shall also notify all affected federal land manager's within thirty days of receipt of any advance notification of any such permit application.
4. **Federal land manager review.** The department shall consider any analysis performed by the federal land manager, provided within thirty days of the notification required by subsection 3 of this section, that shows that a proposed new major stationary source or major modification may have an adverse impact on visibility in any federal class I area. Where the department finds that such an analysis does not demonstrate to the satisfaction of the department that an adverse impact on visibility will result in the federal class I area, the department will, in the notice of opportunity for public hearing on the permit application, either explain its decision or give notice as to where the explanation can be obtained.
5. **Permits.** No source subject to this chapter may be issued a permit to construct if the department determines that an adverse impact on visibility in any federal class I area will occur because of the proposed source or major modification.
6. **Public participation.** Where a permit application has been filed for a source subject to the provisions of this chapter, the public must be given an opportunity for review of the permit application and the department's determination as described in subsection 5 of section 33.1-15-15-01.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-19-03. Visibility monitoring.

The department may require monitoring of visibility in any federal class I area near the proposed new stationary source or major modification for such purposes and by such means as the department deems necessary and appropriate. This can include preconstruction, concurrent with construction, or postconstruction monitoring or any combination thereof.

The department shall provide its proposed requirements for visibility monitoring by the owner or operator to the federal land manager prior to issuing a permit to construct. The department shall consider the federal land manager's comments on the proposed monitoring in any final determinations to be placed on a permit to construct or permit to operate, or both.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-20
CONTROL OF EMISSIONS FROM OIL AND GAS WELL PRODUCTION FACILITIES

Section

33.1-15-20-01 General Provisions

33.1-15-20-02 Registration and Reporting Requirements

33.1-15-20-03 Prevention of Significant Deterioration Applicability and Source Information Requirements

33.1-15-20-04 Requirements for Control of Production Facility Emissions

33.1-15-20-01. General provisions.

1. **Applicability.** The provisions of this chapter apply to any oil or gas well facility which emits air contaminants to the atmosphere.
2. **Definitions.** As used in this chapter, all terms not defined herein shall have the meaning given them in section 33.1-15-01-04 or in North Dakota Century Code chapter 23.1-06.
 - a. "Actively producing" means a well has been producing for thirty days or more from initial production through the wellhead equipment.
 - b. "Casinghead gas" means any gas or vapor, or both gas and vapor, indigenous to and produced from a pool classified as an oil pool by the North Dakota state industrial commission.
 - c. "Completion" means an oil well must be considered completed when the first oil is produced through wellhead equipment into lease tanks from the ultimate producing interval after casing has been run. A gas well must be considered complete when the well is capable of producing gas through wellhead equipment from the ultimate producing zone after casing has been run. A dry hole must be considered complete when all North Dakota state industrial commission provisions of plugging are complied with.
 - d. "Condensate" means the liquid hydrocarbons recovered at the surface that result from condensation due to reduced pressure or temperature of petroleum hydrocarbons existing in a gaseous phase in the reservoir.
 - e. "Continuous burning pilot" means a stable auxiliary flame supported by a reliable fuel source which is independent of wellhead production.
 - f. "Cubic foot of gas" means that volume of gas contained in one cubic foot [28.32 liters] of space and computed at a pressure of fourteen and seven-tenths pounds per square inch [1034 grams per square centimeter] absolute at a base temperature of sixty degrees Fahrenheit [15.5 degrees Celsius].
 - g. "Gas well" means a well producing gas or natural gas from a common source of gas supply as determined by the North Dakota state industrial commission.

- h. "Natural gas or gas" means and includes all natural gas and all other fluid hydrocarbons not herein defined as oil.
- i. "Oil" means and includes crude petroleum oil and other hydrocarbons regardless of specific gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas.
- j. "Oil well" means any well capable of producing oil or oil and casinghead gas from a common source of supply as determined by the North Dakota state industrial commission.
- k. "Operator" means any person or persons who, duly authorized, is in charge of the development of a lease or the operation of a producing property.
- l. "Owner" means the person who has the right to drill into and produce from a pool and to appropriate the oil or gas he produces.
- m. "Pool" means an underground reservoir containing a common accumulation of oil or gas or both; each zone of a structure which is completely separated from any other zone in the same structure is a pool.
- n. "Production facility" means all equipment, wells, flow lines, separators, treaters, tanks, flares, gathering lines, and auxiliary nontransportation-related equipment used in the exploration, development, or subsequent production or handling of oil and gas from an oil or gas well or wells which are located on one or more contiguous or adjacent surface properties, and are under the control of the same person (or persons under common control).
- o. "Recomplete" or "recompletion" means the subsequent completion of a well in a different pool from the pool in which it was originally completed.
- p. "Reservoir" means pool or common source of supply.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-02. Registration and reporting requirements.

1. The owner or operator of any actively producing oil or gas well that is completed or recompleted on or after July 1, 1987, shall submit an oil and gas well registration form available from the department, and an analysis of any gas produced from the well. The registration form and gas analysis must be submitted to the department within ninety days of the well achieving active production status. The registration form must contain sufficient information to allow the department to determine if the oil or gas well and associated production facility is in compliance with all applicable sections of this chapter.
2. [Reserved]
3. The owner or operator of any oil or gas well subject to this section shall inform the department of any change to the information contained on the registration form for a

particular well and shall submit a new gas analysis if the composition or the volume of the gas produced from the well has changed from the previous analysis to cause an increase of ten tons per year or more of sulfur (all sulfur compounds expressed as S).

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-03. Prevention of significant deterioration applicability and source information requirements.

1. Any oil or gas well production facility that is a major stationary source or a major modification as defined in chapter 33.1-15-15, shall comply with the permitting requirements of chapter 33.1-15-15.
2. To determine prevention of significant deterioration of air quality (PSD) applicability for sulfur dioxide, the following formula must be used:

$$E = 0.00084 (R)(T) (\% \text{ H}_2\text{S})$$

Where: E = sulfur dioxide emission rate (tons/yr).

R = the average daily amount of gas burned, incinerated and/or flared (thousand cubic feet per day at 60°F and 14.7 pisa-MCFD) based upon a thirty-day period. The thirty-day period must be the last thirty operating days of a one hundred eighty-day period following the completion or recompletion of a well. In cases where the well is shut in for extended periods during the one hundred eighty-day period following completion or recompletion, a case-by-case determination of PSD can be requested of the department.

T = days of operation per year (day/yr). This number must be three hundred sixty-five unless there are verifiable physical limitations or a federally enforceable permit that limits the number of operating days.

% H₂S = mole percent hydrogen sulfide content as determined by the most recent gas analysis.

The formula is derived as follows:

$$E = \frac{(\text{Mcf}) (1000 \text{ cf}) (\% \text{ H}_2\text{S}) (\text{lb-mole}) (64.06 \text{ lb SO}_2)}{\text{day} \quad \text{Mcf} \quad 100 \quad 379.5 \text{ cf} \quad \text{lb-mole}} \left(\frac{\text{days}}{\text{year}} \right) \left(\frac{\text{ton}}{2000 \text{ lb}} \right)$$

$$E = 0.00084 \frac{(\text{Mcf}) (\text{days of operation}) (\% \text{ H}_2\text{S})}{\text{day} \quad \text{year}}$$

Emissions from all onsite equipment at the production facility must be included in the total annual emission determination.

3. The owner or operator of any oil or gas well production facility subject to subsection 1 of this section shall provide information to demonstrate that emissions from the facility do not significantly contribute to exceeding the ambient air quality standards, as defined in chapter 33.1-15-02, or class I or class II increments, as defined in chapter 33.1-15-15; and shall address other requirements as specified in chapter 33.1-15-15.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-20-04. Requirements for control of production facility emissions.

1. The emissions from all treaters, separators, engines, incinerators, flares, tanks, and other onsite equipment must comply with the requirements of subsection 5.
2. Each flare used for treating gas containing hydrogen sulfide (H₂S), must be equipped and operated with an automatic ignitor or a continuous burning pilot which must be maintained in good working order. This is required even if the flare is used for emergency purposes only. A continuous burning pilot is required if this department determines that an automatic ignition system is ineffective due to production characteristics. The flare stack must be of sufficient height to allow for adequate dispersion of sulfur dioxide (SO₂) necessary to meet the requirements of this article.
3. Any volatile organic compound gas or vapor may be subject to controls as specified in chapter 33.1-15-07.
4. Routine inspections and maintenance of tanks, hatches, compressors, vent lines, pressure relief valves, packing elements, and couplings must be conducted to minimize emissions from equipment used for gas containing hydrogen sulfide (H₂S). Tank hatches must hold a positive working pressure or must be repaired or replaced.
5. The owner or operator of any oil or gas well production facility shall install equipment necessary to ensure that emissions comply with the ambient air quality standards of chapter 33.1-15-02, including, but not limited to, hydrogen sulfide and sulfur dioxide; the class I and class II increments for sulfur dioxide, nitrogen dioxide, and particulate matter of chapter 33.1-15-15, if applicable; the odor concentration limits of chapter 33.1-15-16; and any other applicable chapter of this article. For the purpose of this chapter, compliance must be determined outside the surface boundary of the production facility.
6. When a malfunction, the correction of a malfunction or maintenance at any oil and gas well production facility occurs that can be expected to cause the emission of air

contaminants in violation of this article for longer than twenty-four hours, the person responsible for such installation shall notify the department of such malfunction or maintenance as set forth in section 33.1-15-01-13. This subsection pertains only to the reporting of malfunctions and maintenance and does not obviate the source's responsibility to comply with the remainder of this chapter or article.

7. The owner or operator of any oil and gas well production facility completed prior to the effective date of the revisions to section 33.1-15-20-04 shall comply with the requirements of this chapter within six months of the effective date of these revisions. The owner or operator of any oil and gas well production facility completed after the effective date of the revisions to section 33.1-15-20-04 shall comply with the requirements of this chapter within ninety days of the completion of the well.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-21 **ACID RAIN PROGRAM**

Section

33.1-15-21-01 [Reserved]

33.1-15-21-02 [Reserved]

33.1-15-21-03 [Reserved]

33.1-15-21-04 [Reserved]

33.1-15-21-05 [Reserved]

33.1-15-21-06 [Reserved]

33.1-15-21-07 [Reserved]

33.1-15-21-08 [Reserved]

33.1-15-21-08.1 Permits

33.1-15-21-09 Continuous Emissions Monitoring

33.1-15-21-10 Acid Rain Nitrogen Oxides Emission Reduction Program

33.1-15-21-01. [Reserved]

33.1-15-21-02. [Reserved]

33.1-15-21-03. [Reserved]

33.1-15-21-04. [Reserved]

33.1-15-21-05. [Reserved]

33.1-15-21-06. [Reserved]

33.1-15-21-07. [Reserved]

33.1-15-21-08. [Reserved]

33.1-15-21-08.1. Permits.

The provisions of title 40, Code of Federal Regulations, part 72 and its appendices, as they exist on January 1, 2012, for purposes of implementing an acid rain program that meets the

requirements of title IV of the federal Clean Air Act, are incorporated into this chapter by reference. The term "administrator" means the department except for those duties that cannot be delegated to the department. For those duties that cannot be delegated, "administrator" means the administrator of the United States environmental protection agency. If the provisions or requirements of title 40, Code of Federal Regulations, part 72, conflict with or are not included in section 33.1-15-14-06, the provisions of part 72 shall apply and take precedence.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-21-09. Continuous emissions monitoring.

1. **General.** The monitoring, recordkeeping, and reporting of sulfur dioxide, nitrogen oxides, and carbon dioxide emissions, volumetric flow, and opacity data from affected units under the acid rain program shall be conducted in accordance with title 40, Code of Federal Regulations, part 75. Title 40, Code of Federal Regulations, part 75 and its appendices, as they exist on January 1, 2012, are incorporated by reference.
2. **Exceptions.** Those portions of title 40, Code of Federal Regulations, part 75, that are controlled and administered completely by the United States environmental protection agency will not be enforced by the state. This should not be construed as precluding the United States environmental protection agency from exercising its statutory authority under the Clean Air Act, as amended, or an affected source from complying with the authority or the requirements of the federal acid rain program.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08, 23.1-06-09; S.L. 2017, ch. 199, § 21

33.1-15-21-10. Acid rain nitrogen oxides emission reduction program.

Title 40, Code of Federal Regulations, part 76 and its appendices, as they exist on January 1, 2012, are incorporated into this chapter by reference.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-22 **EMISSIONS STANDARDS FOR HAZARDOUS** **AIR POLLUTANTS FOR SOURCE CATEGORIES**

Section

33.1-15-22-01 Scope

33.1-15-22-02 Definition

33.1-15-22-03 Emissions Standards

33.1-15-22-01. Scope.

The subparts and appendices of title 40, Code of Federal Regulations, part 63, as they exist on July 1, 2015, which are listed in section 33.1-15-22-03 are incorporated into this chapter by reference. Any changes to an emissions standard are listed below the title of the standard.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-22-02. Definition.

For the purposes of this chapter, "administrator" means the department except for those duties that cannot be delegated by the United States environmental protection agency. For those duties that cannot be delegated, administrator means the administrator of the United States environmental protection agency.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-22-03. Emissions standards.

Subpart A - General provisions.

Subpart B - Requirements for control technology determinations for major sources in accordance with Federal Clean Air Act sections 112(g) and 112(j).

*Sections 63.42(a) and 63.42(b) are deleted in their entirety.

Subpart C - List of hazardous air pollutants, petitions process, lesser quantity designations, and source category list.

Subpart D - Regulations governing compliance extensions for early reductions of hazardous air pollutants.

Subpart F - National emissions standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.

Subpart G - National emissions standards for organic hazardous air pollutants from synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater.

Subpart H - National emissions standards for organic hazardous air pollutants for equipment leaks.

Subpart I - National emissions standards for organic hazardous air pollutants for certain processes subject to the negotiated regulation for equipment leaks.

Subpart M - National perchloroethylene air emissions standards for drycleaning facilities.

Subpart N - National emissions standards for chromium emissions from hard and decorative chromium electroplating and chromium anodizing tanks.

Subpart O - Ethylene oxide emissions standards for sterilization facilities.

Subpart Q - National emissions standards for hazardous air pollutants for industrial process cooling towers.

Subpart R - National emissions standards for gasoline distribution facilities (bulk gasoline terminals and pipeline breakout stations).

Subpart T - National emissions standards for halogenated solvent cleaning.

Appendix A to subpart T- Test of solvent cleaning procedures.

Appendix B to subpart T- General provisions applicability to subpart T.

Subpart CC - National emissions standards for hazardous air pollutants from petroleum refineries.

Subpart GG - National emissions standards for aerospace manufacturing and rework facilities.

Subpart HH - National emissions standards for hazardous air pollutants from oil and natural gas production facilities.

* Only the requirements that are applicable to major sources of hazardous air pollutants are adopted.

Subpart JJ - National emissions standards for wood furniture manufacturing operations.

Subpart KK - National emissions standards for the printing and publishing industry.

Table 1 to subpart KK- Applicability of general provisions to subpart KK.

Appendix A to subpart KK - Data quality objective and lower confidence limit approaches for alternative capture efficiency protocols and test methods.

Subpart OO - National emissions standards for tanks - Level 1.

Subpart PP - National emissions standards for containers.

Subpart QQ - National emissions standards for surface impoundments.

Subpart RR - National emissions standards for individual drain systems.

Subpart SS - National emissions standards for closed vent systems, control devices, recovery devices, and routing to a fuel gas system or a process.

Subpart TT - National emissions standards for equipment leaks - Control level 1.

Subpart UU - National emissions standards for equipment leaks - Control level 2 standards.

Subpart VV - National emissions standards for oil-water separators and organic water separators.

Subpart WW - National emissions standards for storage vessels (tanks) - Control level 2.

Subpart YY - National emissions standards for hazardous air pollutants for source categories: generic maximum achievable control technology standards.

Subpart HHH - National emissions standards for hazardous air pollutants from natural gas transmission and storage facilities.

Subpart RRR - National emission standards for hazardous air pollutants for secondary aluminum production.

Table 1 to Subpart RRR - Emission standards for new and existing affected sources.

Table 2 to Subpart RRR - Summary of operating requirements for new and existing affected sources and emission units.

Table 3 to Subpart RRR - Summary of monitoring requirements for new and existing affected sources and emission units.

Appendix A to Subpart RRR - General provisions applicability to subpart RRR.

Subpart UUU - National emission standards for hazardous air pollutants for petroleum refineries: catalytic cracking units, catalytic reforming units, and sulfur recovery units.

Subpart AAAA - National emission standards for hazardous air pollutants: municipal solid waste landfills.

Subpart CCCC - National emission standards for hazardous air pollutants: manufacturing of nutritional yeast.

Subpart EEEE - National emission standards for hazardous air pollutants: organic liquids distribution (nongasoline).

Subpart FFFF - National emission standards for hazardous air pollutants: miscellaneous organic chemical manufacturing.

Subpart GGGG - National emission standards for hazardous air pollutants: solvent extraction for vegetable oil production.

Subpart MMMM - National emission standards for hazardous air pollutants for surface coating of miscellaneous metal parts and products.

Subpart VVVV - National emission standards for hazardous air pollutants for boat manufacturing.

Subpart WWWW - National emissions standards for hazardous air pollutants: reinforced plastics composites production.

Subpart YYYY - National emission standards for hazardous air pollutants for stationary combustion turbines.

Subpart ZZZZ - National emission standards for hazardous air pollutants for stationary reciprocating internal combustion engines.

*Only the requirements that are applicable to major sources of hazardous air pollutants are adopted.

Subpart DDDDD - National emission standards for hazardous air pollutants for industrial, commercial, and institutional boilers and process heaters

Subpart GGGGG - National emission standards for hazardous air pollutants: site remediation.

Subpart UUUUU - National emission standards for hazardous air pollutants: coal-fired and oil-fired electric utility steam generating units.

Subpart JJJJJ - National emission standards for hazardous air pollutants for industrial, commercial, and institutional boilers area sources.

*Only the requirements that are applicable to boilers with a heat input of ten million Btu per hour or more are adopted.

Appendix A to part 63- Test methods.

Appendix B to part 63- Sources defined for early reduction provisions.

Appendix C to part 63 - Determination of the fraction biodegraded (f_{bio}) in a biological treatment unit.

Appendix D to part 63 - Alternative validation procedure for environmental protection agency waste and wastewater methods.

Authority: 42 U.S.C. 7401 et seq.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-23 **FEES**

Section

33.1-15-23-01 Definitions

33.1-15-23-02 Permit to Construct Fees

33.1-15-23-03 Minor Source Permit to Operate Fees

33.1-15-23-04 Major Source Permit to Operate Fees

33.1-15-23-05 Phase I Substitution Units

33.1-15-23-06 Oil and Gas Well Production Facilities

33.1-15-23-01. Definitions.

For purposes of this chapter:

1. "Major source" means any source that has been issued or is required by this article to obtain a title V permit to operate. This includes sources that have begun operation but have not yet applied for a title V permit to operate.
2. "Minor source" has the meaning given to it in section 33.1-15-14-01.1.
3. "Regulated contaminant" means any "regulated air contaminant", as defined in section 33.1-15-14-06, except the following:
 - a. Carbon monoxide.

- b. Any contaminant that is a regulated air contaminant solely because it is a class I or II substance subject to a standard promulgated under or established by title VI of the Federal Clean Air Act.
- c. Any contaminant that is a regulated air contaminant solely because it is subject to a standard or regulation under section 112(r) of the Federal Clean Air Act.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-23-02. Permit to construct fees.

Any person constructing, installing, or establishing a new stationary source or altering an existing source which requires a permit to construct under subsections 1 and 3 of section 33.1-15-14-02 is required to pay a permit to construct application filing fee and a permit to construct processing fee to the department.

- 1. **Application fee.** A nonrefundable filing fee of three hundred twenty-five dollars must be submitted with the permit application.
- 2. **Processing fee.** The applicant shall pay a processing fee based on actual processing costs, including computer data processing costs, incurred by the department for all sources which would involve a major analysis the cost of which would exceed three hundred twenty-five dollars as determined by the department. The following procedures and criteria will be utilized in establishing the fee:
 - a. A record of all permit to construct application processing costs incurred must be maintained by the department.
 - b. Upon request, the department, in consultation with the applicant, will prepare an estimate of the processing fee and the billing schedule that will be utilized in processing the application.
 - c. Statements will be sent to the applicant containing the actual processing costs incurred by the department.
 - d. The applicant must pay the processing fee regardless of whether a permit to construct is issued, denied, or withdrawn.
 - e. Any source that initiates operation under a permit to construct prior to receiving a permit to operate is subject to the fees outlined in section 33.1-15-23-03 or 33.1-15-23-04, whichever is applicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 21

33.1-15-23-03. Minor source permit to operate fees.

- 1. The owner or operator of each installation subject to a permit issued under section 33.1-15-14-03 shall pay an annual permit fee based on the following table:

<u>Classification</u>	<u>Annual Fee (\$)</u>
-----------------------	------------------------

<u>Designated</u>	<u>300</u>
<u>Other</u>	<u>100</u>
<u>State and local government</u>	<u>0</u>
<u>Exempt</u>	<u>0</u>

The following criteria are used to classify sources for determining minor source annual fees:

<u>Designated:</u>	<u>A source that is designated for scheduled inspections.</u>
<u>Other:</u>	<u>As designated by the department.</u>
<u>State and local government:</u>	<u>Any installation owned by the state of North Dakota or a local government.</u>
<u>Exempt:</u>	<u>As designated by the department.</u>

2. The following activities conducted by the department are not included in the annual costs and will be charged to affected sources based on the actual costs incurred by the department:

- a. Observation of source or performance specification testing, or both.
- b. Audits of source operated ambient air monitoring networks.

An accounting of the actual costs incurred under this subsection must accompany the notice of the annual permit fee.

- 3. Annual emissions are derived using representative source test data, "compilation of air pollution emission factors (AP-42)" or other reliable data.
- 4. The classification of "other" and "exempt" shall be designated by the department on a case-by-case basis.
- 5. The department shall send a notice, identifying the amount of the annual permit fee, to the owner or operator of each affected source. The fee is due within sixty days following the date of such notice.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-10; S.L. 2017, ch. 199, § 21

33.1-15-23-04. Major source permit to operate fees.

- 1. The owner or operator of each installation that meets the applicability requirements of subsection 2 of section 33.1-15-14-06 shall pay an annual fee. The fee is determined by the actual annual emissions of regulated contaminants. Fugitive emissions will be included in the fee calculation for sources that are required to count them when determining applicability under section 33.1-15-14-06.
- 2. Effective January 1, 2005, the annual fee shall be assessed at a rate of twenty-five dollars per ton of emissions of each regulated contaminant identified in section 112(b) of the Federal Clean Air Act. All other regulated contaminants will be assessed a fee at

a rate of twelve dollars per ton. The minimum fee will be five hundred dollars per source.

3. In determining the amount due, that portion of any regulated contaminant which is emitted in excess of four thousand tons [3628.74 metric tons] per year will be exempt from the fee calculation.

4. Each boiler with a heat input greater than two hundred fifty million British thermal units per hour will be assessed fees on an individual basis and independent of the fees associated with the rest of the installation. The four thousand ton [3628.74 metric ton] per year cap referenced in subsection 3 is applied to each boiler.

5. Any state-owned or local government-owned facility is exempt from the fee.

6. The fee calculation must be based upon actual annual emissions from the previous calendar year.

7. The fee must be calculated independently for each installation, facility, source, or unit which has been issued a separate permit to operate.

8. The fee rates and the limits established under subsection 2 may be adjusted on an annual basis to account for any increase in the consumer price index published by the department of labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year.

9. Any source that qualifies as a "small business" under section 507 of the Federal Clean Air Act may petition the department to reduce or exempt any fee required under this section. Sufficient documentation of the petitioner's financial status must be submitted with the request to allow the department to evaluate the request.

10. The department shall send a notice, identifying the amount of the annual permit fee, to the owner or operator of each affected source. The fee is due within sixty days following the date of such notice.

11. Greenhouse gases are exempt from the fees in this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 21

33.1-15-23-05. Phase I substitution units.

Substitution units, as defined in 40 CFR part 72, shall pay an annual administrative fee equal to one hundred thousand dollars per source. This fee must be adjusted on an annual basis to account for any increase in the consumer price index. The adjustment shall be made on August thirty-first of each year and shall be based on the department of labor's published change in the index.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-10; S.L. 2017, ch. 199, § 21

33.1-15-23-06. Oil and gas well production facilities.

The owner or operator of an oil and gas well production facility that is required to register the facility in accordance with section 33.1-15-20-02 shall pay a nonrefundable filing fee of one hundred fifty dollars per well. The filing fee must be submitted with the registration form.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-10; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-24
STANDARDS FOR LEAD-BASED PAINT ACTIVITIES

Section

33.1-15-24-01 Scope

33.1-15-24-02 Standards for Activities

33.1-15-24-03 Notification Requirements

33.1-15-24-04 Lead-Based Paint Abatement Licensing, Certification, and Course Approval Fees

33.1-15-24-01. Scope.

The sections of title 40, Code of Federal Regulations, part 745, as they exist on January 31, 2002, which are listed under section 33.1-15-24-02 are incorporated into this chapter by reference. Any changes to the standards are listed below the title of the section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-24-02. Standards for activities.

745.220 Scope and applicability is amended as follows:

- (a) This subpart contains procedures and requirements for the accreditation of lead-based paint activities training programs, procedures, and requirements for the certification of individuals and the licensing of firms engaged in lead-based paint activities and work practice standards for performing such activities. This subpart also requires that, except as discussed below, all lead-based paint activities, as defined in this subpart, be performed by certified individuals and licensed firms.
- (b) This subpart applies to all individuals and firms who are engaged in lead-based paint activities as defined in subpart 745.223, except persons who conduct these activities within residential dwellings that they own, unless the residential dwelling is occupied by a person or persons other than the owner or the owner's immediate family while these activities are being performed, or a child residing in the building has been identified as having an elevated blood lead level.
- (c) Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the federal government having jurisdiction over any property or facility, or engaged in any activity resulting, or which may result, in a lead-based paint hazard, and each officer, agent, or employee thereof shall be subject to, and comply with, all federal, state, interstate, and local requirements, both substantive and procedural.

including the requirements of this subpart regarding lead-based paint, lead-based paint activities, and lead-based paint hazards.

- (d) While this subpart establishes specific requirements for performing lead-based paint activities should they be undertaken, nothing in this subpart requires that the owner or occupant undertake any particular lead-based paint activity.

745.223 Definitions

The terms United States environmental protection agency administrator and agency are deleted and replaced with department, except for those duties that cannot be delegated by the United States environmental protection agency. For those duties that cannot be delegated, environmental protection agency means the United States environmental protection agency and administrator means the administrator of the United States environmental protection agency.

"Authorized state" is added and means a state that has been authorized in accordance with title 40, Code of Federal Regulations, part 745, subpart Q, to administer and enforce sections 745.225, 745.226, and 745.227.

The acronym "EPA" is added and means the United States environmental protection agency or authorized state when used in the phrases "accredited by EPA" and "certified by EPA" or when referring to EPA accreditation of a training course or referring to EPA certification of an individual.

Certified firm is amended as follows: delete the words certified and certificate and replace with licensed and license.

"Child-occupied facility" means a building, or portion of a building, constructed prior to 1978, visited regularly by the same child, six years of age or under, on at least two different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least three hours and the combined weekly visit lasts at least six hours, and the combined annual visits last at least sixty hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools, and kindergarten classrooms.

"Elevated blood lead level" is changed from twenty micrograms of lead per deciliter of whole blood for a single venous test to ten micrograms of lead per deciliter of whole blood for a single venous test. The remainder of the definition is deleted.

"Lead-based paint activities" means in the case of target housing and child-occupied facilities, inspection, risk assessment, and abatement, as defined in this subpart.

"Lead-based paint hazard" is amended as defined in 40 CFR 745.223 and as defined in 40 CFR 745.63 and means hazardous lead-based paint, dust-lead hazard or soil-lead hazard or any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, or lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects as identified by the administrator pursuant to TSCA section 403.

"Licensed firm" is added and means a company, partnership, corporation, sole proprietorship, association, or other business entity that performs lead-based paint activities to which the department has issued a license approval pursuant to North Dakota Administrative Code chapter 33.1-15-24.

"Target housing" means any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any one or more children age six years or under resides or is expected to reside in such housing for the elderly or persons with disabilities) or any zero-bedroom dwelling.

The following definitions are incorporated into section 745.223:

"Chewable surface" as defined in 40 CFR 745.63.

"Concentration" as defined in 40 CFR 745.63.

"Dripline" as defined in 40 CFR 745.63.

"Dust-lead hazard" as defined in 40 CFR 745.65(b).

"Friction surface" as defined in 40 CFR 745.63.

"Impact surface" as defined in 40 CFR 745.63.

"Paint-lead hazard" as defined in 40 CFR 745.65(a).

"Play area" as defined in 40 CFR 745.63.

"Renovation" as defined in 40 CFR 745.83.

"Soil-lead hazard" as defined in 40 CFR 745.65(c).

"Soil sample" as defined in 40 CFR 745.63.

"Wipe sample" as defined in 40 CFR 745.63.

"Work practice requirements" as defined in 40 CFR 745.65(d).

745.225 Accreditation of training programs: Target housing and child-occupied facilities.

745.225(a)(2) is deleted.

In 745.225(b)(4), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.225(f)(3)(v), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.225(h)(4)(iv), the number fifteen is deleted and replaced with ten.

In 745.225(h)(5), the references to section 14 of TSCA or by part 2 of this title is deleted and replaced with North Dakota Administrative Code section 33.1-15-01-16.

745.226 Certification of individuals and firms engaged in lead-based paint activities: target housing and child-occupied facilities.

745.226(a)(2) is deleted.

In 745.226(a)(6), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.226(b)(1)(ii) after EPA add: or an authorized state.

745.226(d) is deleted and replaced with: Certification based on prior training or prior certification with the United States environmental protection agency or an authorized state.

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- (1) Anyone who has completed an approved lead training course within nine months of the effective date of this rule and has not completed a certification examination will have six months from the effective date of this rule to complete a certification examination and make application to the state.
-
- (2) Anyone who is certified by the United States environmental protection agency or an authorized state prior to the effective date of this rule will have six months from the effective date of this rule to apply for reciprocal lead-based paint certification and license in North Dakota. Reciprocity applicants should submit an application, proof of training and certification, and the appropriate fee in accordance with North Dakota Administrative Code section 33.1-15-24-04. Certification will be for a period of three years from the date of the last training course attended.

In 745.226(e)(3), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.226(f), delete the words certification and certified and replace with licensing and licensed.

745.226(f)(5) is deleted.

In 745.226(f)(6), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.226(f)(7), the reference to section 745.238 is deleted and replaced with North Dakota Administrative Code section 33.1-15-24-04.

In 745.226(h), delete the word certification and replace with license.

In 745.226(i), delete the words certification and certified and replace with license and licensed when referring to a firm.

In 745.226(i)(4)(iv), the number fifteen is deleted and replaced with ten.

In 745.226(i)(5), the references to TSCA section 14 or by part 2 of this title is deleted and replaced with North Dakota Administrative Code section 33.1-15-01-16.

745.227 Work practice standards for conducting lead-based paint activities: target housing and child-occupied facilities.

In 745.227(e)(3), certified firm is deleted and replaced with licensed firm.

745.227(e)(4) is deleted in its entirety and replaced with North Dakota Administrative Code section 33.1-15-24-03.

745.227(i) is added as follows:

- (i) Recordkeeping. All reports or plans required in this section shall be maintained by the licensed firm or individual who prepared the report for no fewer than three years. The licensed firm or individual shall also provide copies of these reports to the building owner who contracted for its services.

745.233 Lead-based paint activities requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-24-03. Notification requirements.

1. Notification.

- a. Notification of commencement of lead-based paint abatement activities in a residential dwelling or child-occupied facility or as a result of a federal, state, or local order shall be given to the department ten days prior to the commencement of the abatement activities. The notification shall be provided on a form provided by the department.
- b. Notification of all lead-based paint accredited training courses offered in North Dakota shall be provided to the department at least ten days prior to the commencement of the course. Notification of completion of the course shall be provided to the department within ten days after the course has been completed. Both notifications shall be provided on a form provided by the department.

2. Notification requirements. Each owner or operator to which this chapter applies shall:

- a. Provide the department with written notice of intent to abate lead-based paint.
- b. Indicate whether the notice is original or a revised notification and update the notice as necessary, including but not limited to:
- (1) Update notification for new start dates.
- (2) Update notification for change in job location.
- (3) Update notification for cancellations.
- c. Postmark or deliver the notice as follows:
- (1) At least ten working days before abatement begins.
- (2) As early as possible before, but not later than, the following working day after abatement begins if the abatement is the result of an order from a federal, state, or local government.

3. Required information. Each owner or operator to which this chapter applies shall include the following information in the notification required by subsection 1:

- a. The name, address, and telephone number of the owner of the facility.
- b. The name, address, and telephone number of the abatement company.

- c. A description of the facility or the affected part of the facility being abated, including the size, age, and present use of the facility.
- d. An estimate of the amount of lead-based paint to be abated from the facility in terms of square feet.
- e. The location of the facility being abated, including the street address, city, county, and state if different from that required by subdivision a.
- f. The scheduled starting date and completion date of the abatement work.
- g. A description of the abatement work to be performed, including the abatement techniques and methods to be employed during the activities and a description of the affected facility components.
- h. The name and location of the waste disposal site where the lead-based paint containing waste material will be deposited.
- i. The name, address, and telephone number of the waste transporter.
- j. A signed statement by the lead-based paint contractor that all lead-based paint abatement supervisors and lead-based paint workers assigned to this project are certified by the department, in accordance with section 33.1-15-24-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

33.1-15-24-04. Lead-based paint abatement licensing, certification, and course approval fees.

1. **Purpose.** This section establishes fees charged for the issuance of licenses and certificates by the department for lead-based paint activities. This section also establishes fees charged to recover costs associated with regulatory activities involving lead-based paint.
2. **Scope.** This section applies to a person or company who is an applicant for a lead-based paint certificate, license, or course approval issued by the department.
3. **Exemptions.**
 - a. No application fees, license fees, amendment fees, or renewal fees shall be required for:
 - (1) Nonprofit educational institutions are exempt from the fees prescribed in this section. This exemption does not apply to institutions which perform any of the following:
 - (a) Remunerated services to other persons.
 - (b) Activities performed under a government contract.
 - (2) Public employees.
 - (3) Firms which perform only in-house lead-based paint activities.

b. The department may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of this section as it determines are authorized by law and are otherwise in the public interest.

4. **Payment of fees.** Any fees required by this subsection are not refundable.

a. License, certification, and course approval fees. The appropriate licensing, certification, or course approval fee shall accompany the application when filed with the department.

b. Renewal fees. The appropriate renewal fee shall accompany the renewal application when filed with the department.

c. Special project fees. Special project means those projects submitted to the department for review and for which specific fees are not prescribed in this chapter. Special project fees will be based upon the current professional staff hourly rate. Fees for special projects are payable upon notification by the department that review of the project is completed.

d. Method of payment. Fee payments shall be made by check, draft, or money order made payable to the department.

e. Submittal of application and fee payment. The application for licensure or certification shall be submitted to:

North Dakota Department of Environmental Quality
Division of Air Quality
1200 Missouri Avenue, Room 304
P.O. Box 5520
Bismarck, ND 58506-5520

5. **Failure by applicant or licensee to pay prescribed fees.** If the department finds that an applicant or a licensee has failed to pay a prescribed fee required in this section, the department will not process any application and may suspend or revoke any certification, license, or course approval involved or may issue an order with respect to licensed activities as the department determines to be appropriate or necessary in order to carry out the provisions of this chapter and of the North Dakota Century Code.

6. **Schedule of fees for lead-based paint activities.**

a. Applicants for lead-based paint licenses, certifications, and course approvals shall pay the following fees:

<u>Fee Category</u>	<u>Term</u>	<u>Fee (in dollars)</u>
<u>Contractor license</u>	<u>3 years</u>	<u>\$450.00</u>
<u>Individual certifications</u>	<u>3 years</u>	<u>\$150.00</u> <u>(per discipline)</u>

b. Training course approvals. Any training provider requesting a review of the provider's course for approval by the department shall submit a filing fee of one hundred fifty dollars and pay an application processing fee. The application processing fee will be based on the actual processing costs, including time spent by the department to conduct the course review and course audit, and any travel and lodging expenses the department incurs conducting these activities.

Following the course review and audit, and after making a determination on the accreditation status of the course, a statement will be sent to the applicant listing the remaining application processing costs. The course provider must conduct a course in North Dakota for audit purposes within fifteen months of the submittal of the initial filing fee or the initial filing fee and any application processing fees paid will be forfeited.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04; S.L. 2017, ch. 199, § 21

CHAPTER 33.1-15-25 **REGIONAL HAZE REQUIREMENTS**

Section

33.1-15-25-01 Definitions

33.1-15-25-02 Best Available Retrofit Technology

33.1-15-25-03 [Reserved]

33.1-15-25-04 Monitoring, Recordkeeping, and Reporting

33.1-15-25-01. Definitions.

The definitions in title 40, Code of Federal Regulations, part 51, section 301, as they exist on October 1, 2005, are incorporated by reference into this chapter. For purposes of this chapter only:

1. "Boiler operating day" means any twenty-four-hour period between midnight and the following midnight during which any fuel is combusted at any time at the steam generating unit.
2. "Contributes to visibility impairment" means a change in visibility impairment in a class I federal area of five-tenths deciviews or more (twenty-four-hour average) above the average natural visibility baseline. A source exceeds the threshold when the ninety-eighth percentile (eighth highest value) of the modeling results based on any one year of the three years of meteorological data modeled exceeds five-tenths deciviews.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-25-02. Best available retrofit technology.

1. [Reserved]
2. **Installation of best available retrofit technology.** The owner or operator of any existing stationary facility as defined in title 40, Code of Federal Regulations, section 301, which contributes to visibility impairment in a class I federal area shall install and operate best available retrofit technology. The equipment shall be installed and operating as expeditiously as practicable but in no event later than five years after the United States environmental protection agency's approval of North Dakota's state implementation plan revision for best available retrofit technology.

3. **Operation and maintenance of best available retrofit technology.** The owner or operator of a facility required to install best available retrofit technology under subsection 1 shall establish procedures to ensure such equipment is properly operated and maintained.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

33.1-15-25-03. [Reserved]

33.1-15-25-04. Monitoring, recordkeeping, and reporting.

The owner or operator of any existing stationary facility that is required to install best available retrofit technology shall conduct monitoring, recordkeeping, and reporting sufficient to show compliance or noncompliance. Monitoring for sulfur dioxide and nitrogen oxides from the main stack of a fossil-fuel-fired steam electric plant shall be conducted using continuous emissions monitoring systems which comply with the requirements of section 33.1-15-21-09. Particulate monitoring shall be in accordance with the requirements of subsection 10 of section 33.1-15-14-06. Recordkeeping and reporting shall comply with the requirements of section 33.1-15-14-06. Monitoring, recordkeeping, and reporting for other source units shall comply with the requirements of section 33.1-15-14-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-06-04, 23.1-06-08; S.L. 2017, ch. 199, § 21

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-17 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-17
PUBLIC WATER SUPPLY SYSTEMS

CHAPTER

33.1-17-01 PUBLIC WATER SUPPLY SYSTEMS IN NORTH DAKOTA

CHAPTER 33.1-17-01
PUBLIC WATER SUPPLY SYSTEMS IN NORTH DAKOTA

Section

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- 33.1-17-01-06 Maximum Contaminant Levels, Action Levels, Treatment Technique Requirements, and Maximum Residual Disinfectant Levels**
- 33.1-17-01-07 Inorganic Chemical Sampling and Monitoring Requirements**
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- 33.1-17-01-20 Ground Water System - Source Requirements**

33.1-17-01-01. Responsibility.

It is the responsibility of any supplier of water to comply within the meaning of this chapter pursuant to North Dakota Century Code chapter 61-28.1.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-02. Definitions.

For the purpose of this chapter the following definitions shall apply:

1. "Action level" means the concentration of lead or copper in water specified in title 40, Code of Federal Regulations, part 141, subpart I, section 141.80(c), that determines, in some cases, the treatment requirements set forth under title 40, Code of Federal Regulations, part 141, subpart I, that a water system is required to complete.
2. "Bag filters" means pressure-driven separation devices that remove particulate matter larger than one micrometer using an engineered porous filtration media. They are typically constructed of a nonrigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to the outside.
3. "Bank filtration" means a water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water through a riverbed or riverbanks. Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other wells.
4. "Best available technology" or "BAT" means the best technology, treatment techniques, or other means which the department finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purposes of setting maximum contaminant levels for synthetic organic chemicals, any best available technology must be at least as effective as granular activated carbon.
5. "Cartridge filters" means pressure-driven separation devices that remove particulate matter larger than one micrometer using an engineered porous filtration media. They are typically constructed as rigid or semirigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.
6. "Clean compliance history", for the purposes of subpart Y, means a record of no MCL violations as specified in title 40, Code of Federal Regulations, part 141.63; no monitoring violations as specified in title 40, Code of Federal Regulations, part 141.21 or as specified in title 40, Code of Federal Regulations, part 141, subpart Y; and no coliform treatment technique trigger exceedances or treatment technique violations as specified in title 40, Code of Federal Regulations, part 141, subpart Y.
7. "Coagulation" means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.
8. "Combined distribution system" means the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.
9. "Community water system" means a public water system which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents.
10. "Compliance cycle" means the nine-year calendar year cycle during which public water systems must monitor for inorganic and organic chemicals excluding lead, copper, trihalomethanes, and unregulated contaminants. Each compliance cycle consists of three 3-year compliance periods. The first calendar year cycle begins January 1, 1993, and ends December 31, 2001; the second begins January 1, 2002, and ends December 31, 2010; and the third begins January 1, 2011, and ends December 31, 2019.
11. "Compliance period" means a three-year calendar year period within a compliance cycle during which public water systems must monitor for inorganic and organic chemicals excluding lead, copper, trihalomethanes, and unregulated contaminants. Each compliance cycle has three

3-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; and the third from January 1, 1999, to December 31, 2001.

12. "Composite correction program" or "CCP" means a systematic, comprehensive procedure for identifying, prioritizing, and remedying factors that limit water treatment plant performance as set forth in the United States environmental protection agency handbook entitled Optimizing Water Treatment Plant Performance Using The Composite Correction Program, EPA/625/6-91/027, 1998 edition. A composite correction program consists of two phases, a comprehensive performance evaluation and comprehensive technical assistance.

13. "Comprehensive performance evaluation" or "CPE" means a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation, and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For purposes of compliance with title 40, Code of Federal Regulations, part 141, subpart P and subpart T, the comprehensive performance evaluation shall consist of at least the following components:

a. Assessment of plant performance;

b. Evaluation of major unit processes;

c. Identification and prioritization of performance limiting factors;

d. Assessment of the applicability of comprehensive technical assistance; and

e. Preparation of a comprehensive performance evaluation report.

14. "Comprehensive technical assistance" or "CTA" means the performance improvement phase of a composite correction program that is implemented if the comprehensive performance evaluation results indicate improved performance potential. During the comprehensive technical assistance phase, identified and prioritized factors that limit water treatment plant performance are systematically addressed and eliminated.

15. "Confluent growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

16. "Consecutive system" means a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

17. "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.

18. "Conventional filtration treatment" means a series of processes including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

19. "Corrosion inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

20. "Cross connection" means any connection or arrangement between two otherwise separate piping systems, one of which contains potable water and the other either water of unknown or questionable safety or steam, gas, or chemical whereby there may be a flow from one system to the other, the direction of flow depending on the pressure differential between the two systems.

21. "CT" or "CT calc" means the product of residual disinfectant concentration (C) in milligrams per liter determined before or at the first customer and the corresponding disinfectant contact time (T) in minutes. If disinfectants are applied, at more than one point prior to the first customer, the CT of each disinfectant sequence must be determined before or at the first customer to determine the total percent inactivation or total inactivation ratio. In determining the total inactivation ratio, the residual disinfectant concentration of each disinfection sequence and the corresponding contact time must be determined before any subsequent disinfection application points. CT ninety-nine point nine is the CT value required for ninety-nine point nine percent (three-logarithm) inactivation of giardia lamblia cysts. CT ninety-nine point nine values for a wide variety of disinfectants and conditions are set forth under title 40, Code of Federal Regulations, part 141, subpart H. CT calculated divided by CT ninety-nine point nine is the inactivation ratio. The total inactivation ratio is determined by adding together the inactivation ratio for each disinfection sequence. A total inactivation ratio equal to or greater than one point zero is assumed to provide a three-logarithm inactivation of giardia lamblia cysts.
22. "Department" means the department of environmental quality.
23. "Diatomaceous earth filtration" means a process resulting in substantial particulate removal in which a precoat cake of diatomaceous earth filter media is deposited on a support membrane or septum, and while the water is filtered by passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.
24. "Direct filtration" means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.
25. "Disinfectant" means any oxidant, including, but not limited to, chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.
26. "Disinfectant contact time" (T in CT calculations) means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (C) is measured. Where only one C is measured, T is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at where C is measured. Where more than one C is measured, T, for the first measurement of C, is the time in minutes that it takes the water to move from the first or only point of disinfectant application to a point before or at the point where the first C is measured. For subsequent measurements of C, T is the time in minutes that it takes for water to move from the previous C measurement point to the C measurement point for which the particular T is being calculated. Disinfectant contact time in pipelines must be calculated by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. T within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.
27. "Disinfection" means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.
28. "Disinfection profile" means a summary of daily giardia lamblia inactivation through the treatment plant. The disinfection profile shall be developed as set forth under title 40, Code of Federal Regulations, part 141, subpart P (141.172) and subpart T (141.530-141.536).
29. "Domestic or other nondistribution system plumbing problem" means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken.

30. "Dual sample set" means a set of two samples collected at the same time and same location, with one sample analyzed for total trihalomethanes (TTHM) and the other sample analyzed for haloacetic acids five (HAA5). Dual sample sets are collected for the purpose of conducting an initial distribution system evaluation (IDSE) under title 40, Code of Federal Regulations, parts 141.600 to 141.605 inclusive, and determining compliance with the TTHM and HAA5 MCLs under title 40, Code of Federal Regulations, parts 141.620 to 141.629 inclusive.
31. "Effective corrosion inhibitor residual", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means a concentration sufficient to form a passivating film on the interior walls of pipe.
32. "Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.
33. "Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.
34. "Filter profile" means a graphical representation of individual filter performance based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.
35. "Filtration" means a process for removing particulate matter from water by passage through porous media.
36. "Finished water" means water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection or addition of corrosion control chemicals).
37. "First draw sample" means a one-liter sample of tap water, collected in accordance with title 40, Code of Federal Regulations, part 141, section 141.86(b)(2), that has been standing in plumbing pipes at least six hours and is collected without flushing the tap.
38. "Flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.
39. "Flowing stream" means a course of running water flowing in a definite channel.
40. "Granular activated carbon ten" or "GAC10" means granular activated carbon filter beds with an empty-bed contact time of ten minutes based on average daily flow and a carbon reactivation frequency of every one hundred eighty days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with subpart V MCLs under title 40, Code of Federal Regulations, part 141.64(b)(2) shall be one hundred twenty days.
41. "Granular activated carbon twenty" or "GAC 20" means granular activated carbon filter beds with an empty-bed contact time of twenty minutes based on average daily flow and a carbon reactivation frequency of every two hundred forty days.
42. "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.
43. "Ground water under the direct influence of surface water" means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as giardia lamblia or cryptosporidium. Ground water under the direct influence of surface water also means significant and relatively rapid shifts in water

characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

44. "Haloacetic acids five" or "HAA5" means the sum of the concentrations in milligrams per liter of the haloacetic acid compounds monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid, rounded to two significant figures after addition.

45. "Halogen" means one of the chemical elements chlorine, bromine, or iodine.

46. "Initial compliance period" means the first full compliance period that begins January 1, 1993, during which public water systems must monitor for inorganic and organic chemicals excluding lead, copper, trihalomethanes, and unregulated contaminants.

47. "Lake/reservoir" means a natural or manmade basin or hollow on the earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

48. "Large water system", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means a water system that serves more than fifty thousand persons.

49. "Lead service line" means a service line made of lead that connects the water main to the building inlet and any pigtail, gooseneck, or other fitting that is connected to a lead line.

50. "Legionella" means a genus of bacteria, some species of which have caused a type of pneumonia called legionnaires disease.

51. "Level 1 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality, including water storage; source and treatment considerations that bear on distributed water quality, where appropriate, such as whether a ground water system is disinfected; existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sampling processing. The system must conduct the assessment consistent with any state directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

52. "Level 2 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and, when possible, the likely reason that the system triggered the assessment. A level 2 assessment provides a more detailed examination of the system, including the system's monitoring and operational practices, than does a level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the state, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality, including water storage; source and treatment considerations that bear on distributed water quality, where appropriate, such as whether a ground water system is disinfected; existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any state directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the state in the case of an E. coli MCL violation.

53. "Locational running annual average" or "LRAA" means the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.
54. "Maximum contaminant level" means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.
55. "Maximum residual disinfectant level" or "MRDL" means a level of a disinfectant added for water treatment that must not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.
56. "Maximum total trihalomethane potential" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after seven days at a temperature of twenty-five degrees Celsius [77 degrees Fahrenheit] or above.
57. "Medium-size water system", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means a water system that serves three thousand three hundred one to fifty thousand persons.
58. "Membrane filtration" means a pressure-driven or vacuum-driven separation process in which particulate matter larger than one micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.
59. "Near the first service connection" means at one of the twenty percent of all service connections in the entire system that are nearest the water supply treatment facility as measured by water transport time within the distribution system.
60. "Noncommunity water system" means a public water system that is not a community water system that primarily provides service to other than year-round residents. A noncommunity water system is either a "nontransient noncommunity" or "transient noncommunity" water system.
61. "Nontransient noncommunity water system" means a noncommunity water system that regularly serves at least twenty-five of the same persons over six months per year.
62. "Optimal corrosion-control treatment", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means the corrosion-control treatment that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the water system to violate any national primary drinking water regulations.
63. "Person" means an individual, corporation, company, association, partnership, municipality, or any other entity.
64. "Plant intake" means the works or structures at the head of a conduit through which water is diverted from a source (e.g., river or lake) into the treatment plant.
65. "Point of disinfectant application" means the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.
66. "Point-of-entry treatment device" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.
67. "Point-of-use treatment device" means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.

68. "Potable water" means water free from impurities in amounts sufficient to cause disease or harmful physiological effects, with the physical, chemical, biological, or radiological quality conforming to applicable maximum permissible contaminant levels.
69. "Presedimentation" means a preliminary treatment process used to remove gravel, sand, and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.
70. "Product" means any chemical or substance added to a public water system, any materials used in the manufacture of public water system components or appurtenances, or any pipe, storage tank, valve, fixture, or other materials that come in contact with water intended for use in a public water system.
71. "Public water system" means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals sixty or more days out of the year. A public water system includes any collection, treatment, storage, and distribution facilities under control of the operator of the system and used primarily in connection with the system; and, any collection or pretreatment storage facilities that are not under control of the operator which are used primarily in connection with the system. A public water system does not include systems that provide water through pipes or constructed conveyances other than pipes that qualify for the exclusions set forth under section 1401(4)(B)(i) and (ii) of the Federal Safe Drinking Water Act [42 U.S.C. 300f(4)(B)(i) and (ii)]. A public water system is either a "community" or a "noncommunity" water system.
72. "Repeat compliance period" means any subsequent compliance period after the initial compliance period during which public water systems must monitor for inorganic and organic chemicals excluding lead, copper, trihalomethanes, and unregulated contaminants.
73. "Residual disinfectant concentration" (C in CT calculations) means the concentration of disinfectant measured in milligrams per liter in a representative sample of water.
74. "Sampling schedule" means the frequency required for submitting drinking water samples to a certified laboratory for examination.
75. "Sanitary defect" means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.
76. "Sanitary survey" means an onsite review of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.
77. "Seasonal system" means a noncommunity water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season.
78. "Sedimentation" means a process for removal of solids before filtration by gravity or separation.
79. "Service line sample" means a one-liter sample of water, collected in accordance with title 40, Code of Federal Regulations, part 141, section 141.86(b)(3), that has been standing for at least six hours in a service line.
80. "Single-family structure", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means a building constructed as a single-family residence that is currently used either as a residence or a place of business.

81. "Slow sand filtration" means a process involving passage of raw water through a bed of sand at low velocity resulting in substantial particulate removal by physical and biological mechanisms.
82. "Small water system", for the purpose of title 40, Code of Federal Regulations, part 141, subpart I only, means a water system that serves three thousand three hundred or fewer persons.
83. "Specific ultraviolet absorption" or "SUVA" means specific ultraviolet absorption at two hundred fifty-four nanometers, an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of two hundred fifty-four nanometers in meters to the minus one by its concentration of dissolved organic carbon, the fraction of the total organic carbon that passes through a zero point four five micrometer pore diameter filter, in milligrams per liter.
84. "Subpart H systems" means public water systems using surface water or ground water under the direct influence of surface water as a source that are subject to the requirements of title 40, Code of Federal Regulations, part 141, subpart H.
85. "Supplier of water" means any person who owns or operates a public water system.
86. "Surface water" means all water which is open to the atmosphere and subject to surface runoff.
87. "System with a single service connection" means a system which supplies drinking water to consumers with a single service line.
88. "Too numerous to count" means that the total number of bacterial colonies exceeds two hundred on a forty-seven millimeter membrane filter used for coliform detection.
89. "Total organic carbon" means total organic carbon in milligrams per liter measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.
90. "Total trihalomethanes" means the sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane, and tribromomethane [bromoform]), rounded to two significant figures.
91. "Transient noncommunity water system" means a noncommunity water system that primarily provides service to transients.
92. "Trihalomethane" means one of the family of organic compounds, named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.
93. "Two-stage lime softening" means a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.
94. "Uncovered finished water storage facility" means a tank, reservoir, or other facility used to store water that will undergo no further treatment except residual disinfection and is open to the atmosphere.
95. "Virus" means a virus of fecal origin which is infectious to humans by waterborne transmission.
96. "Water system" means all sources of water and their surroundings and includes all structures, conducts, and appurtenances by means of which the water is collected, treated, stored, or delivered.

97. "Waterborne disease outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the appropriate local or state agency.

98. "Wholesale system" means a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-02, 61-28.1-03; S.L. 2017, ch. 199, §§ 68, 69

33.1-17-01-03. Coverage.

This chapter applies to all public water systems except those public water systems which meet all of the following conditions:

1. Consists only of distribution and storage facilities and does not have any collection and treatment facilities;
2. Obtains all of its water from, but is not owned or operated by, a public water system to which these regulations apply;
3. Does not sell water to any person; and
4. Is not a carrier which conveys passengers in interstate commerce.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-04. Designated responsible individuals.

The owner or operating entity of each public water system shall designate an individual, or individuals, who shall be responsible for communicating with the department in matters relating to system construction or alteration, monitoring and sampling, maintenance, operation, recordkeeping, and reporting required by these regulations. Any changes in designated individuals or assigned responsibilities shall be promptly reported to the department.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-05. Approved laboratories and analytical procedures.

All samples shall be examined by the department or by any other laboratory certified by the department for drinking water purposes, except that measurements for turbidity and free chlorine may be performed by any person deemed qualified by the department. Turbidity measurements shall be made by a nephelometric method approved by the department. All methods of sample preservation and analyses shall be as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03, 61-28.1-07; S.L. 2017, ch. 199, § 69

33.1-17-01-06. Maximum contaminant levels, action levels, and treatment technique requirements, and maximum residual disinfectant levels.

1. Inorganic chemicals. The maximum contaminant levels, action levels, and treatment technique requirements for inorganic chemical contaminants excluding disinfection byproducts shall be as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141, subpart G.

<u>CONTAMINANT</u>	<u>MAXIMUM CONTAMINANT LEVEL MILLIGRAM(S) PER LITER</u>	<u>ACTION LEVEL MILLIGRAM(S) PER LITER</u>	<u>TREATMENT TECHNIQUES REQUIREMENTS</u>
<u>Antimony</u>	<u>0.006</u>		
<u>Arsenic</u>	<u>0.05 (until January 22, 2006)</u> <u>0.010 (effective January 23, 2006)</u>		
<u>Asbestos</u>	<u>7 million fibers per liter (longer than ten micrometers)</u>		
<u>Barium</u>	<u>2</u>		
<u>Beryllium</u>	<u>0.004</u>		
<u>Cadmium</u>	<u>0.005</u>		
<u>Chromium</u>	<u>0.1</u>		
<u>Copper</u>		<u>The 90th percentile level must be less than or equal to 1.3</u>	<u>Source water and corrosion control treatment</u>
<u>Cyanide (as free cyanide)</u>	<u>0.2</u>		
<u>Fluoride</u>	<u>4.0</u>		
<u>Lead</u>		<u>The 90th percentile level must be less than or equal to 0.015</u>	<u>Source water and corrosion control treatment, public education, and lead service line replacement</u>
<u>Mercury</u>	<u>0.002</u>		
<u>Nickel</u>	<u>0.1</u>		
<u>Nitrate (as N)</u>	<u>10</u>		
<u>Nitrite (as N)</u>	<u>1</u>		
<u>Selenium</u>	<u>0.05</u>		
<u>Thallium</u>	<u>0.002</u>		
<u>Total Nitrate and Nitrite (as N)</u>	<u>10</u>		

At the discretion of the department, nitrate levels not to exceed twenty milligrams per liter may be allowed in a noncommunity water system if the supplier of water demonstrates to the satisfaction of the department that:

- a. Such water will not be available to children under six months of age;
- b. There will be continuous posting of the fact that nitrate levels exceed ten milligrams per liter and the potential health effect of exposure;
- c. Local and state public health authorities will be notified annually of nitrate levels that exceed ten milligrams per liter; and
- d. No adverse health effects shall result.

2. Organic chemicals. The maximum contaminant levels and treatment technique requirements for organic chemical contaminants excluding disinfection byproducts and disinfection byproduct precursors shall be as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141, subpart G.

<u>CONTAMINANT</u>	<u>MAXIMUM CONTAMINANT LEVEL MILLIGRAM(S) PER LITER</u>	<u>ACTION LEVEL MILLIGRAM(S) PER LITER</u>	<u>TREATMENT TECHNIQUE REQUIREMENTS</u>
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Nonvolatile Synthetic Organic Chemicals:

<u>Acrylamide</u>	
<u>Alachlor</u>	<u>0.002</u>
<u>Atrazine</u>	<u>0.003</u>
<u>Benzo (a) pyrene</u>	<u>0.0002</u>
<u>Carbofuran</u>	<u>0.04</u>
<u>Chlordane</u>	<u>0.002</u>
<u>Dalapon</u>	<u>0.2</u>
<u>Dibromochloropropane (DBCP)</u>	<u>0.0002</u>
<u>Di (2-ethylhexyl) adipate</u>	<u>0.4</u>
<u>Di (2-ethylhexyl) phthalate</u>	<u>0.006</u>
<u>Dinoseb</u>	<u>0.007</u>
<u>Diquat</u>	<u>0.02</u>
<u>Endothall</u>	<u>0.1</u>
<u>Endrin</u>	<u>0.002</u>
<u>Epichlorohydrin</u>	

The combination (or product) of dose and monomer level may not exceed 0.05 percent dosed at 1 part per million (or equivalent)

<u>Ethylene dibromide (EDB)</u>	<u>0.00005</u>
<u>Glyphosate</u>	<u>0.7</u>
<u>Heptachlor</u>	<u>0.0004</u>
<u>Heptachlor epoxide</u>	<u>0.0002</u>
<u>Hexachlorobenzene</u>	<u>0.001</u>
<u>Hexachlorocyclopentadiene</u>	<u>0.05</u>
<u>Lindane</u>	<u>0.0002</u>
<u>Methoxychlor</u>	<u>0.04</u>
<u>Oxamyl (Vydate)</u>	<u>0.2</u>
<u>Polychlorinated biphenyls (PCBs)</u>	<u>0.0005</u>
<u>Pentachlorophenol</u>	<u>0.001</u>
<u>Picloram</u>	<u>0.5</u>
<u>Simazine</u>	<u>0.004</u>
<u>Toxaphene</u>	<u>0.003</u>
<u>2,3,7,8-TCDD (Dioxin)</u>	<u>0.00000003</u>
<u>2,4-D</u>	<u>0.07</u>
<u>2,4,5-TP Silvex</u>	<u>0.05</u>

The combination (or product) of dose and monomer level may not exceed 0.01 percent dosed at 20 parts per million (or equivalent)

Volatile Synthetic Organic Chemicals:

<u>Benzene</u>	<u>0.005</u>
<u>Carbon tetrachloride</u>	<u>0.005</u>
<u>p-Dichlorobenzene</u>	<u>0.075</u>
<u>o-Dichlorobenzene</u>	<u>0.6</u>
<u>1,2-Dichloroethane</u>	<u>0.005</u>

<u>1,1-Dichloroethylene</u>	<u>0.007</u>
<u>cis-1,2-Dichloroethylene</u>	<u>0.07</u>
<u>trans-1,2-Dichloroethylene</u>	<u>0.1</u>
<u>Dichloromethane</u>	<u>0.005</u>
<u>1,2-Dichloropropane</u>	<u>0.005</u>
<u>Ethylbenzene</u>	<u>0.7</u>
<u>Monochlorobenzene</u>	<u>0.1</u>
<u>Styrene</u>	<u>0.1</u>
<u>Tetrachloroethylene</u>	<u>0.005</u>
<u>Toluene</u>	<u>1</u>
<u>1,2,4-Trichlorobenzene</u>	<u>0.07</u>
<u>1,1,1-Trichloroethane</u>	<u>0.2</u>
<u>1,1,2-Trichloroethane</u>	<u>0.005</u>
<u>Trichloroethylene</u>	<u>0.005</u>
<u>Vinyl chloride</u>	<u>0.002</u>
<u>Xylenes (total)</u>	<u>10</u>

3. Filtration and disinfection treatment.

- a. General requirements. All subpart H systems that utilize surface water sources shall provide filtration and disinfection treatment. All subpart H systems that utilize ground water sources deemed by the department to be under the direct influence of surface water shall provide disinfection treatment and shall either comply with filtration avoidance criteria or provide filtration treatment.
- b. Treatment technique requirements. The department hereby identifies filtration and disinfection as treatment techniques to protect against the potential adverse health effects of exposure to giardia lamblia, cryptosporidium, legionella, viruses, heterotrophic plate count bacteria, and turbidity. The treatment techniques apply only to subpart H systems. Subpart H systems that serve ten thousand or more persons shall be deemed to be in compliance with the treatment techniques if the requirements set forth under title 40, Code of Federal Regulations, part 141, subparts H and P, are met. Subpart H systems that serve fewer than ten thousand persons shall be deemed to be in compliance with the treatment techniques if the requirements set forth under title 40, Code of Federal Regulations, part 141, subpart H, are met.

4. Radioactivity. The maximum contaminant levels for radioactivity are as follows:

<u>CONTAMINANT</u>	<u>MAXIMUM CONTAMINANT LEVEL (MCL)</u>
<u>Combined radium-226 and radium-228</u>	<u>5 picocuries per liter (pCi/L)</u>
<u>Gross alpha particle activity (including radium-226, but excluding radon and uranium)</u>	<u>15 picocuries per liter (pCi/L)</u>
<u>Uranium</u>	<u>30 micrograms per liter (ug/L)</u>

5. Microbiological. The treatment technique triggers, treatment technique violations, E. coli maximum contaminant level violations, and monitoring violations are as follows:

- a. Treatment technique triggers. A system must conduct assessments, in accordance with the requirements under title 40, Code of Federal Regulations, part 141, subpart Y after exceeding the following treatment technique triggers:

- (1) Level 1 treatment technique triggers.

- (a) A system, which collects forty or more samples per month, exceeds five point zero percent total coliform-positive samples per month.
 - (b) A system, which collects less than forty samples per month, has two or more total coliform-positive samples per month.
 - (c) A system fails to take all required repeat samples following a total coliform-positive sample.
 - (2) Level 2 treatment technique triggers.
 - (a) A system incurs an E. coli maximum contaminant level violation, as specified in title 40, Code of Federal Regulations, part 141, subpart Y.
 - (b) A system has a second level 1 trigger, as specified in title 40, Code of Federal Regulations, part 141, subpart Y, within a rolling twelve-month period unless the department has determined why the samples that caused the first level 1 treatment technique trigger were total coliform positive and has determined that the system has corrected the problem.
- b. Treatment technique violations. A system has a treatment technique violation when any of the following conditions occur:
 - (1) A system exceeds a treatment technique trigger and then fails to conduct the required assessment or corrective actions within the required time frame as specified in title 40, Code of Federal Regulations, part 141, subpart Y.
 - (2) A seasonal system fails to complete a state-approved start-up procedure before serving water to the public.
- c. E. coli maximum contaminant level violations. A system is in violation of the maximum contaminant level for E. coli when any of the following conditions occur:
 - (1) A system has an E. coli-positive repeat sample following a total coliform-positive routine sample.
 - (2) A system has a total coliform-positive repeat sample following an E. coli-positive routine sample.
 - (3) A system fails to take all required repeat samples following an E. coli-positive routine sample.
 - (4) A system fails to analyze for E. coli bacteria when any repeat sample tests positive for total coliform bacteria.
- d. Monitoring violations. A system incurs a monitoring violation if any of the following conditions occur:
 - (1) A system fails to take every required routine sample in a compliance period.
 - (2) A system fails to analyze for E. coli following a total coliform-positive routine sample.
- e. The department hereby identifies the following as the best technology, treatment techniques, or other means generally available for achieving compliance with the treatment technique triggers and E. coli maximum contaminant level: protection of wells from contamination by appropriate placement and construction; maintenance of a disinfection residual throughout the distribution system; proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, cross-connection control

programs, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, and continual maintenance of a positive water pressure in all parts of the distribution system; filtration and disinfection or disinfection of surface water and disinfection of ground water using strong oxidants such as chlorine, chlorine dioxide, or ozone; and the development and implementation of a department-approved wellhead protection program.

6. Disinfectants. The maximum residual disinfectant levels for disinfectants are as follows:

<u>DISINFECTANT</u>	<u>MAXIMUM RESIDUAL DISINFECTANT LEVEL IN MILLIGRAMS PER LITER</u>
<u>Chlorine</u>	<u>4.0 as free chlorine</u>
<u>Chloramines</u>	<u>4.0 as combined chlorine</u>
<u>Chlorine dioxide</u>	<u>0.8 as chlorine dioxide</u>

The department identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum residual disinfectant levels: control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.

7. Disinfection byproducts. The maximum contaminant levels for total trihalomethanes, haloacetic acids five, bromate, and chlorite are as follows:

<u>DISINFECTION BYPRODUCT</u>	<u>MAXIMUM CONTAMINANT LEVEL IN MILLIGRAMS PER LITER</u>
<u>Total trihalomethanes</u>	<u>0.080</u>
<u>Haloacetic acids five</u>	<u>0.060</u>
<u>Bromate</u>	<u>0.010</u>
<u>Chlorite</u>	<u>1.0</u>

The department identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant level for total trihalomethanes and the maximum contaminant levels for haloacetic acids five, bromate, and chlorite: for total trihalomethanes and haloacetic acids five, enhanced coagulation, enhanced softening, or granular activated carbon ten with chlorine as the primary and residual disinfectant; for bromate, control of the ozone treatment process to reduce production of bromate; and for chlorite, control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels. All best available technology and compliance shall be prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141.64.

8. Disinfection byproduct precursors. The department hereby identifies enhanced coagulation and enhanced softening as treatment techniques to control the level of disinfection byproduct precursors in drinking water treatment and distribution systems. The treatment techniques apply only to subpart H community and nontransient noncommunity water systems that use conventional treatment. Such systems shall be deemed to be in compliance with the treatment techniques if the requirements set forth under title 40, Code of Federal Regulations, part 141, subpart L, are met.

9. Confirmation sampling. The department may require confirmation samples and average confirmation sample results with initial sample results to determine compliance. At the discretion of the department, sample results due to obvious monitoring errors may be deleted prior to determining compliance.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-07. Inorganic chemical sampling and monitoring requirements.

1. Sampling frequency for community and nontransient noncommunity water systems.
 - a. Inorganics excluding lead and copper. Community and nontransient noncommunity water systems shall conduct monitoring to determine compliance with the maximum contaminant levels for the inorganic chemicals, excluding lead and copper, as set forth under title 40, Code of Federal Regulations, part 141, subpart C.
 - b. Lead and copper. Community and nontransient noncommunity water systems shall comply with the monitoring and treatment technique requirements for lead and copper set forth under title 40, Code of Federal Regulations, part 141, subpart I, as amended July 1, 2009.
 - c. Unregulated contaminants. Community and nontransient noncommunity water systems shall monitor for sulfate as set forth under title 40, Code of Federal Regulations, part 141, subpart E.
 - d. Monitoring waivers. With the exception of arsenic, copper, lead, nitrate, and nitrite, the department may grant community and nontransient noncommunity water systems waivers from the monitoring requirements for the inorganic chemicals as set forth under title 40, Code of Federal Regulations, part 141, subparts C and E. The department may issue monitoring waivers only if the conditions set forth under title 40, Code of Federal Regulations, part 142, subpart B, are fully met.
2. Sampling frequency for transient noncommunity water systems. Transient noncommunity water systems shall conduct monitoring to determine compliance with the maximum contaminant levels for nitrate and nitrite as set forth under title 40, Code of Federal Regulations, part 141, subpart C.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-08. Organic chemical sampling and monitoring requirements.

1. **Volatile and nonvolatile synthetic organic chemicals.**
 - a. Coverage. Community and nontransient noncommunity water systems shall conduct monitoring to determine compliance with the maximum contaminant levels for the volatile and nonvolatile synthetic organic chemicals.
 - b. Sampling frequency. The number and frequency of samples shall be as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141, subpart C.
 - c. Compliance. Compliance for each point that is sampled shall be prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141, subpart C.
2. **Unregulated contaminants.**
 - a. Coverage. Community and nontransient noncommunity water systems shall monitor for unregulated organic contaminants.
 - b. Monitoring requirements. Systems shall monitor for unregulated organic contaminants as set forth under title 40, Code of Federal Regulations, part 141, subpart E.

3. Monitoring waivers. With the exception of acrylamide and epichlorohydrin, the department may grant community and nontransient noncommunity water systems waivers from the monitoring requirements for the organic chemicals as set forth under title 40, Code of Federal Regulations, part 141, subpart C. The department may issue waivers only if the conditions set forth under title 40, Code of Federal Regulations, part 142, subpart B, are fully met.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-08.1. Disinfectants, disinfectant residuals, disinfection byproducts, and disinfection byproduct precursors.

Public water systems shall conduct monitoring to determine compliance with maximum contaminant levels, maximum residual disinfectant levels, and treatment technique requirements for disinfectants, disinfection residuals, disinfection byproducts, and disinfection byproduct precursors as set forth under title 40, Code of Federal Regulations, part 141, subparts L and V. Public water systems shall also comply with the requirements for conducting an initial distribution system evaluation as set forth under title 40, Code of Federal Regulations, part 141, subpart U.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-09. Filtration and disinfection treatment sampling and monitoring requirements.

1. Coverage. All subpart H systems shall conduct monitoring to determine compliance with the treatment technique requirements for filtration and disinfection.
2. Systems utilizing surface water sources. All subpart H systems that utilize surface water sources shall comply with the turbidity and residual disinfectant concentration sampling and monitoring requirements set forth under title 40, Code of Federal Regulations, part 141, subpart H. Those systems serving ten thousand or more persons shall also comply with the disinfection profiling and benchmarking requirements set forth under title 40, Code of Federal Regulations, part 141, subpart P. Beginning January 1, 2002, those systems that serve ten thousand or more persons and provide conventional filtration treatment or direct filtration shall also comply with the individual filter sampling and monitoring requirements set forth under title 40, Code of Federal Regulations, part 141, subpart P. Those systems serving fewer than ten thousand persons shall also comply with the requirements set forth under title 40, Code of Federal Regulations, part 141, subpart T and the Federal Register volume 69, number 124, Tuesday, June 29, 2004, pages 38850-38857.
3. Systems utilizing ground water sources under the direct influence of surface water. The following sampling and monitoring requirements apply to subpart H systems that utilize ground water sources deemed by the department to be under the direct influence of surface water:
 - a. All systems that provide filtration treatment shall comply with the turbidity and residual disinfectant concentration sampling and monitoring requirements set forth under title 40, Code of Federal Regulations, part 141, subpart H. Those systems serving ten thousand or more persons shall also comply with the disinfection profiling and benchmarking requirements set forth under title 40, Code of Federal Regulations, part 141, subpart P. Beginning January 1, 2002, those systems that serve ten thousand or more persons and provide conventional filtration treatment or direct filtration shall also comply with the individual filter sampling and monitoring requirements set forth under title 40, Code of Federal Regulations, part 141, subpart P. Those systems serving fewer than ten thousand persons shall also comply with the requirements set forth under title 40, Code of Federal

Regulations, part 141, subpart T and the Federal Register volume 69, number 124, Tuesday, June 29, 2004, pages 38850-38857.

b. All systems that do not provide filtration treatment shall comply with the filtration avoidance criteria and applicable disinfection sampling and monitoring requirements set forth under title 40, Code of Federal Regulations, part 141, subpart H. Those systems serving ten thousand or more persons shall also comply with the disinfection profiling and benchmarking requirements and, beginning January 1, 2002, the filtration avoidance criteria set forth under title 40, Code of Federal Regulations, part 141, subpart P. Those systems serving fewer than ten thousand persons shall also comply with the requirements set forth under title 40, Code of Federal Regulations, part 141, subpart T and the Federal Register volume 69, number 124, Tuesday, June 29, 2004, pages 38850-38857.

4. Recycle provisions. All subpart H systems that utilize conventional filtration or direct filtration treatment and that recycle spent filter backwash water, thickener supernatant, or liquids from dewatering processes must meet the requirements as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141.76, subpart H.

5. Enhanced treatment for cryptosporidium. All public water systems that utilize a surface water source or a ground water source under the direct influence of surface water shall meet the treatment technique requirements for cryptosporidium set forth under title 40, Code of Federal Regulations, part 141, subpart W. These requirements are in addition to requirements found in title 40, Code of Federal Regulations, part 141, subparts H, P, and T.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-10. Radioactivity monitoring and compliance.

Community water systems shall sample for gross alpha particle activity, radium-226, radium-228, and uranium. Monitoring frequency and compliance shall be as prescribed by the department and set forth under title 40, Code of Federal Regulations, parts 141.26 and 141.66.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-11. Microbiological sampling and monitoring requirements.

1. Monitoring requirements.

a. General. Until March 31, 2016, the provisions set forth under title 40, Code of Federal Regulations, parts 141.21(a) and 141.21(d) apply.

The provisions set forth under title 40, Code of Federal Regulations, parts 141.21(b), (c), (e), (f), and (g) are effective until all required repeat monitoring under title 40, Code of Federal Regulations, part 141.21(b) and fecal or E. coli testing under title 40, Code of Federal Regulations, part 141.21(e) that was initiated by a total coliform-positive sample that was taken before April 1, 2016, is completed as well as analytical method, reporting, recordkeeping, public notification, and consumer confidence report requirements associated with that monitoring and testing.

Until March 31, 2016, the provisions set forth under title 40, Code of Federal Regulations, parts 141.63(a), (a)(1), (a)(2), and (b) apply.

Beginning April 1, 2016, the provisions set forth under title 40, Code of Federal Regulations, part 141, subpart Y, include both the maximum contaminant level and treatment technique requirements for all public water systems.

b. Sample siting plans. All total coliform samples must be collected according to a written sample siting plan. Systems must develop a written sample siting plan that identifies the sample collection schedule and sampling sites that are representative of the water throughout the distribution system. This plan must be submitted to the department no later than March 31, 2016. The plan is subject to department review and revisions. Routine, repeat, and any sampling sites necessary to meet the requirements specified under title 40, Code of Federal Regulations, part 141, subparts Y and S must be shown on the plan.

(1) The routine samples must be collected at regular time intervals throughout the month except that systems using ground water and serving four thousand nine hundred people or less may collect all of the required samples on a single day if the samples are collected from different sites.

(2) Systems must take at least the minimum number of required samples even if the system has had an E. coli maximum contaminant level violation or has exceeded the coliform treatment technique triggers as specified in title 40, Code of Federal Regulations, part 141, subpart Y.

(3) Systems may take more than the minimum number of required routine samples and these results must be used to determine whether a coliform treatment technique trigger has been exceeded as specified in title 40, Code of Federal Regulations, part 141, subpart Y. All routine and repeat total coliform samples must be taken in accordance with the existing sample siting plan.

(4) Repeat monitoring locations must be identified in the sample siting plan. The repeat samples must be collected at the following locations, unless the provisions of paragraphs (b)(5)(a) or (b)(5)(b) are met:

(a) At least one repeat sample must be collected from the original sampling site that was total coliform-positive.

(b) At least one repeat sample must be collected from a site within five service connections upstream of the original total coliform-positive sampling site.

(c) At least one repeat sample must be collected from a site within five service connections downstream of the original total coliform-positive sampling site.

(5) If the original total coliform-positive sampling site is at or one away from the end of the distribution system the department may waive the requirement to collect at least one repeat sample upstream or downstream of the original total coliform-positive sampling site. The system must still take all required repeat samples. However, the department may allow alternate sampling locations other than the upstream or downstream sites. Systems required to conduct triggered source water monitoring as set forth under title 40, Code of Federal Regulations, part 141, subpart S, must take ground water source samples in addition to the required repeat sampling.

(a) Systems may elect to identify alternative fixed repeat locations or criteria for selecting repeat sampling sites on a case-by-case basis in a standard operating procedure. These repeat monitoring locations should be indicative of a pathway for contamination of the distribution system. The department shall review the alternative repeat monitoring locations to verify and determine the extent of potential contamination of the distribution system at the specific alternative

repeat monitoring location. The department shall review the alternative repeat monitoring locations as needed.

(b) Ground water systems which serve one thousand or fewer persons may propose repeat sampling locations that differentiate potential source water and distribution system contamination, such as by sampling at entry points to the distribution system. A ground water system with a single well required to conduct triggered source water monitoring may, with the approval of the department, take one of its repeat samples at the triggered source water monitoring location as set forth under title 40, Code of Federal Regulations, part 141.402(a), subpart S. The system must demonstrate, to the department's satisfaction, the sample siting plan remains representative of water quality in the distribution system. If approved by the department, the system may use that sample result to meet the monitoring requirements as set forth under title 40, Code of Federal Regulations, part 141.402(a), subpart S and under title 40, Code of Federal Regulations, part 141.853(a)(5)(ii), subpart Y.

[1] If a repeat sample is taken at a triggered source water monitoring location and is positive for E. coli bacteria, the system has violated the E. coli maximum contaminant level and must also comply with title 40, Code of Federal Regulations, part 141.402(a)(3), subpart S. If a system takes more than one repeat sample at the triggered source water monitoring location, the system may reduce the number of additional source water samples required under title 40, Code of Federal Regulations, part 141.402(a)(3), subpart S by the number of repeat samples taken at that location that were not positive for E. coli bacteria.

[2] If more than one repeat sample is taken at a triggered source water monitoring location under title 40, Code of Federal Regulations, part 141.402(a), subpart S and more than one repeat sample is positive for E. coli bacteria, the system has violated the E. coli maximum contaminant level and must also comply with title 40, Code of Federal Regulations, part 141.403(a)(1), subpart S.

[3] If all repeat samples taken at a triggered source water monitoring location are E. coli-negative and a repeat sample that is taken at a monitoring location other than the triggered source water monitoring location is E. coli-positive, the system has violated the E. coli maximum contaminant level, but is not required to comply with title 40, Code of Federal Regulations, part 141.402(a)(3), subpart S.

(6) Any alternative repeat monitoring locations or triggered source water monitoring locations as specified under title 40, Code of Federal Regulations, part 141, subpart Y and under title 40, Code of Federal Regulations, part 141, subpart S, will be reviewed and approved by the department. When using these sites, the system must demonstrate that the sample siting plan remains representative of the water quality in the distribution system. It may be determined that monitoring at the entry point to the distribution system, such as for undisinfected ground water systems, is an effective way to differentiate between potential source water and distribution system problems.

c. Special purpose samples. Special purpose samples, such as those taken to determine whether disinfection practices following pipe placement, replacement, or repair are sufficient, and samples invalidated by the department or laboratory, must not be used to determine whether the coliform treatment technique trigger has been exceeded as specified under title 40, Code of Federal Regulations, part 141, subpart Y. Repeat samples

taken in accordance with title 40, Code of Federal Regulations, part 141, subpart Y are not considered special purpose samples and must be used to determine whether the coliform treatment technique trigger has been exceeded.

- d. Invalidation of total coliform samples. Any total coliform-positive samples invalidated under title 40, Code of Federal Regulations, part 141, subpart Y, do not count towards meeting the minimum monitoring requirements.

The department may invalidate a total coliform-positive sample only if one of the following conditions is met:

- (1) The laboratory establishes the total coliform-positive result was caused by improper sample analysis.
- (2) The department determines, based upon the results of the repeat samples as required under title 40, Code of Federal Regulations, part 141, subpart Y, that the total coliform-positive sample resulted from a domestic or other nondistribution system problem. This provision applies only to systems that have more than one service connection and only if:
 - (a) All repeat samples collected at the same site as the original total coliform-positive sample are also total coliform-positive; and
 - (b) All repeat samples collected at a location other than the original total coliform-positive sample site are total coliform-negative.
- (3) The department may determine that substantial grounds exist to indicate that the total coliform-positive result was due to a circumstance or condition not reflective of the water quality in the distribution system. The system must still collect all repeat samples and use them to determine whether a coliform treatment technique trigger has been exceeded as specified under title 40, Code of Federal Regulations, part 141, subpart Y. To invalidate a total coliform-positive sample under this provision, the decision and supporting paperwork must be documented in writing and approved and signed by the supervisor of the state official who recommended the decision. The department shall make this document available to the environmental protection agency and to the public. The written documentation must state the specific cause of the total coliform-positive sample and what action the system has or will take to correct the problem. Invalidation may not be based solely on the grounds that all repeat samples are total coliform-negative.

A laboratory must invalidate a total coliform sample, unless total coliforms are detected, only if one of the following conditions is met:

- (1) The sample produces a turbid culture in the absence of gas production using an analytical technique where gas formation is examined, such as the multiple-tube fermentation technique;
- (2) The sample produces a turbid culture in the absence of an acid reaction in the presence-absence coliform test; or
- (3) The sample exhibits confluent growth or produces colonies too numerous to count with an analytical technique using a membrane filter, such as membrane filter technique.

Systems must collect a replacement sample for total coliform bacteria analysis from the same location as the original sample if the original sample is invalidated by the department or laboratory. Replacement samples must be collected within twenty-four hours of

notification by the department or laboratory and submitted for total coliform analysis. The system must continue to resample within twenty-four hours and have the sample analyzed for total coliforms until a valid result is obtained. The department may waive the twenty-four hour time limit on a case-by-case basis.

Criteria the department may implement for waiving the twenty-four hour sampling time frame includes, but is not limited to, the following:

(1) Laboratory closures; or

(2) Mail delivery issues.

2. Monitoring frequency.

a. General. All public water systems shall sample for total coliform bacteria in each calendar month that the system provides water to the public. The number of samples required must be determined by the population served by the system. The population range of twenty-five to one thousand includes public water systems which have at least fifteen service connections, but that serve less than twenty-five persons.

<u>POPULATION SERVED</u>	<u>MINIMUM NUMBER OF SAMPLES PER MONTH</u>
<u>25 to 1,000</u>	<u>1</u>
<u>1,001 to 2,500</u>	<u>2</u>
<u>2,501 to 3,300</u>	<u>3</u>
<u>3,301 to 4,100</u>	<u>4</u>
<u>4,101 to 4,900</u>	<u>5</u>
<u>4,901 to 5,800</u>	<u>6</u>
<u>5,801 to 6,700</u>	<u>7</u>
<u>6,701 to 7,600</u>	<u>8</u>
<u>7,601 to 8,500</u>	<u>9</u>
<u>8,501 to 12,900</u>	<u>10</u>
<u>12,901 to 17,200</u>	<u>15</u>
<u>17,201 to 21,500</u>	<u>20</u>
<u>21,501 to 25,000</u>	<u>25</u>
<u>25,001 to 33,000</u>	<u>30</u>
<u>33,001 to 41,000</u>	<u>40</u>
<u>41,001 to 50,000</u>	<u>50</u>
<u>50,001 to 59,000</u>	<u>60</u>
<u>59,001 to 70,000</u>	<u>70</u>
<u>70,001 to 83,000</u>	<u>80</u>
<u>83,001 to 96,000</u>	<u>90</u>
<u>96,001 to 130,000</u>	<u>100</u>
<u>130,001 to 220,000</u>	<u>120</u>
<u>220,001 to 320,000</u>	<u>150</u>

<u>320,001 to 450,000</u>	<u>180</u>
<u>450,001 to 600,000</u>	<u>210</u>
<u>600,001 to 780,000</u>	<u>240</u>
<u>780,001 to 970,000</u>	<u>270</u>
<u>970,001 to 1,230,000</u>	<u>300</u>
<u>1,230,001 to 1,520,000</u>	<u>330</u>
<u>1,520,001 to 1,850,000</u>	<u>360</u>
<u>1,850,001 to 2,270,000</u>	<u>390</u>
<u>2,270,001 to 3,020,000</u>	<u>420</u>
<u>3,020,001 to 3,960,000</u>	<u>450</u>
<u>3,960,001 or more</u>	<u>480</u>

Following any total coliform-positive sample taken, systems must comply with the repeat monitoring requirements and E. coli analytical requirements as specified in title 40, Code of Federal Regulations, part 141, subpart Y.

As set forth under title 40, Code of Federal Regulations, part 141, subpart Y, once all routine and repeat monitoring for a calendar month has been completed, either the system or the department must determine whether any coliform treatment technique triggers have been exceeded. The system must complete any assessments associated to the triggers.

b. Seasonal noncommunity water systems. All seasonal noncommunity water systems, including systems that keep the distribution system pressurized year round must complete a state-approved start-up procedure. Start-up procedures may include source and distribution system disinfection and collection and analysis of water samples for total coliform bacteria. The system must certify back to the department, within fourteen days of opening, the start-up procedure was completed.

c. Unfiltered subpart H systems. At the discretion of the department, systems that use surface water or ground water under the direct influence of surface water that do not filter in compliance with title 40, Code of Federal Regulations, part 141, subparts H, P, T, and W must collect at least one sample for total coliform bacteria analysis near the first service connection each day that the turbidity level of the source water exceeds one nephelometric turbidity unit as specified in title 40, Code of Federal Regulations, part 141, subpart H. The sample must be collected within twenty-four hours of the first exceedance unless the department determines that the system, due to logistical or other problems beyond its control, cannot have the sample analyzed within thirty hours of collection. The system must identify an alternative sample collection schedule. The sample result must be included in determining whether the coliform treatment technique trigger has been exceeded as specified under title 40, Code of Federal Regulations, part 141, subpart Y.

3. Repeat monitoring and E. coli requirements.

a. Repeat monitoring. If a routine sample collected under the requirements specified in title 40, Code of Federal Regulations, part 141, subpart Y is total coliform-positive, a system must collect no fewer than a set of three repeat samples for total coliform bacteria analysis for each total coliform-positive routine sample. The system must collect the set of repeat samples within twenty-four hours of being notified by the department or the laboratory of the positive total coliform sample. The department may extend the twenty-four hour time limit on a case-by-case basis if the system has a logistical problem or other problems beyond the system's control. The department may choose criteria for the system to use in

lieu of the case-by-case decisions. The department shall specify to the system the time frame for collecting the repeat samples. The department may not waive the requirement to collect repeat samples under these provisions.

All repeat samples must be collected on the same day except that the department may allow systems with a single service connection to:

- (1) Collect the required set of repeat samples over a three-day period; or
- (2) Collect a larger volume repeat sample in one or more sample containers of any size as long as the total volume collected is at least three hundred milliliters.

If one or more repeat samples in the set of required repeat samples is total coliform-positive, an additional set of repeat samples must be collected, within twenty-four hours unless the department extends the twenty-four hour time frame, meeting the requirements set forth under title 40, Code of Federal Regulations, part 141, subpart Y. Additional sets of repeat samples must be collected until no total coliform bacteria are detected in one complete set or the department determines a coliform treatment technique trigger as specified in title 40, Code of Federal Regulations, part 141, subpart Y, has been exceeded as a result of a repeat sample being total coliform-positive. If a coliform treatment technique trigger, as identified in this provision, has been exceeded as a result of a routine sample being total coliform-positive, the system only needs to conduct one round of repeat monitoring for each total coliform-positive routine sample. The system shall report to the department and notify the public when an E. coli maximum contaminant level is exceeded.

After a system collects a routine sample and before it learns the results of that sample, if the system collects another routine sample from within five adjacent service connections of the first sample, and the first sample, after analysis, is found to contain total coliform bacteria, the system may count the subsequent sample as a repeat sample instead of a routine sample.

All routine and repeat results taken under title 40, Code of Federal Regulations, part 141, subpart Y, and not invalidated by the department or laboratory, must be used to determine whether a coliform treatment technique trigger, under the provision stated above, has been exceeded.

- b. E. coli testing. A system must analyze each total coliform-positive routine or repeat sample for E. coli bacteria. The system must notify the department by the end of the business day or by the end of the next business day if the department offices are closed of a positive E. coli bacteria result. The department or laboratory will not forgo E. coli testing on any total coliform-positive bacteria sample.

4. Assessment requirements.

- a. Level 1 assessment. A level 1 assessment must be performed as soon as possible when a system exceeds a level 1 treatment technique trigger as specified in title 40, Code of Federal Regulations, part 141, subpart Y.

A level 1 assessment must be conducted by the water system operator or by a consultation, such as a phone interview or onsite visit, with the department.

When completing the level 1 assessment, the system must describe sanitary defects found, what corrective actions were completed, the proposed time frame for any remaining corrective actions that need to be addressed, and any other department directives that may be required. The system may note on the assessment form that no sanitary defects were identified.

Within thirty days after learning of a treatment technique trigger exceedance, the system must submit a completed level 1 assessment form to the department. The department may extend the thirty-day time frame on a case-by-case basis.

The department shall review the completed level 1 assessment and determine if the assessment is sufficient. The assessment form must include proposed time frames for any corrective actions not completed. If the department determines the level 1 assessment not to be sufficient, the department shall consult with the system. If the department requires any revisions to the level 1 assessment, the system must submit, to the department, a revised level 1 assessment form on an agreed-upon schedule that will not exceed thirty days from the date of the consultation.

The department shall review the completed assessment form and determine if the cause of the level 1 assessment was found. If the cause of the level 1 assessment was found, the system must describe how the problem was corrected. The department shall determine on a case-by-case basis the schedule for any corrective actions that need to be addressed.

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- b. Level 2 assessment. A level 2 assessment must be performed as soon as possible when a system exceeds a level 2 treatment technique trigger as specified in title 40, Code of Federal Regulations, part 141, subpart Y. The system must comply with any expedited actions or additional actions required by the department in the case of an E. coli maximum contaminant level violation. The department shall require a level 2 assessment be completed before a boil water order is lifted. Only the department may perform a level 2 assessment as a result of an E. coli maximum contaminant level violation.

A level 2 assessment will be conducted by the department or department-approved assessors. A system may conduct a level 2 assessment if the system has personnel with the certification or qualifications as specified by the department. A system must have personnel with an operator certification level one level higher than the water system being evaluated.

When completing the level 2 assessment, the system must describe sanitary defects found, what corrective actions were completed, the proposed time frame for any remaining corrective actions that need to be addressed, and any other department directives that may be required. The system may note on the assessment form that no sanitary defects were identified.

Within thirty days after learning of a treatment technique trigger exceedance, the system must submit a completed level 2 assessment form to the department. The department may extend the thirty-day time frame on a case-by-case basis.

The department shall review the completed level 2 assessment and determine if the assessment is sufficient. The assessment form must include proposed time frames for any corrective actions not completed. If the department determines the level 2 assessment not to be sufficient, the department shall consult with the system. If the department requires any revisions to the level 2 assessment, the system must submit, to the department, a revised level 2 assessment form on an agreed-upon schedule that does not exceed thirty days from the date of the consultation.

The department shall review the completed assessment form and determine if the cause of the level 2 assessment was found. If the cause of the level 2 assessment was found, the system must describe how the problem was corrected. The department shall determine on a case-by-case basis the schedule for any corrective actions that need to be addressed.

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- c. Corrective actions. A system must correct any sanitary defects identified in either the level 1 or the level 2 assessment as specified under title 40, Code of Federal Regulations, part

141, subpart Y. If any corrective actions cannot be corrected by the time the level 1 or the level 2 assessment form is required to be submitted to the department, the system must complete the corrective action(s) in accordance with an approved time frame decided upon during the consultation between the system and the department. The system must notify the department when each corrective action is completed.

- d. Consultation. The department or the system may at any time during the assessment or corrective action phase request a consultation with the other entity to determine the appropriate actions that need to be taken. The system may consult with the department on all relevant information that may affect its ability to complete the corrective action, a proposed time frame scheduled for a correction action, or any other department directives.

5. Sanitary surveys.

- a. Frequency. All surface water and ground water under the direct influence of surface water systems shall undergo a sanitary survey no less frequently than once every year. All systems purchasing surface water or ground water under the direct influence of surface water shall undergo a sanitary survey no less frequently than once every three years.

Community ground water systems, including systems purchasing ground water, that are not providing at least four-log treatment of viruses and have not been determined by the department to exhibit outstanding performance shall undergo a sanitary survey no less frequently than once every three years. Community ground water systems, including systems purchasing ground water, which are providing at least four-log treatment of viruses or which have been determined by the department to exhibit outstanding performance shall undergo a sanitary survey no less frequently than once every five years.

Noncommunity ground water systems, including systems purchasing ground water, which are not providing at least four-log treatment of viruses shall undergo a sanitary survey no less frequently than once every three years. Noncommunity ground water systems, including systems purchasing ground water, that are providing at least four-log treatment of viruses shall undergo a sanitary survey no less frequent than once every five years.

The department will allow sanitary surveys to be phased. The components of the phased sanitary survey must be completed within the established frequency.

- b. Responsibilities. Sanitary surveys must be performed by the department or an agent approved by the department. Information collected on sources of contamination within a delineated wellhead protection area during the development and implementation of an approved wellhead protection program, if available, must be considered when conducting sanitary surveys.

The department shall review the sanitary surveys for systems serving one thousand persons or less to determine if the system is taking the proper number of monthly total coliform bacteria samples.

Public water systems are responsible for ensuring that the required sanitary surveys are conducted.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-12. Monitoring of consecutive public water systems.

When a public water system supplies water to one or more other public water systems, the department may modify the monitoring requirements imposed to the extent that the interconnection of

the systems justifies treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a schedule specified by the department.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-13. Public notification.

All public water systems are required to notify the public they serve when they fail to comply with the requirements of the national primary drinking water regulations (NPDWRs), fail to comply with the requirements of any schedule prescribed pursuant to a variance or exemption, or incur other situations posing a risk to public health. Owners and operators must follow the form, manner, frequency, and content of a public notice as prescribed by the department and set forth under title 40, Code of Federal Regulations, part 141, subpart Q.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-13.1. Consumer confidence reports.

1. **Coverage and general requirements.** Community water systems shall deliver an annual consumer confidence report to all billing units or service connections provided drinking water by the system. The report shall contain information on the quality of the drinking water delivered by the system and characterize risks from exposure to contaminants detected in the drinking water. For the purpose of the report, detected means at or above the levels set forth under title 40, Code of Federal Regulations, part 141, subpart O.

2. **Effective dates.** Existing community water systems shall deliver annual reports by July first of each year. Annual reports shall contain information collected by December thirty-first of the previous calendar year.

New community water systems shall deliver the first report by July first of the year after its first full calendar year in operation and subsequent reports by July first of each year. Community water systems that sell water to other community water systems shall provide applicable information to the buyer systems as set forth under title 40, Code of Federal Regulations, part 141, subpart O.

3. **Content.** Each report shall contain the information set forth under title 40, Code of Federal Regulations, subpart O.

4. **Report delivery.** Community water systems shall comply with the report delivery requirements set forth under title 40, Code of Federal Regulations, subpart O.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-14. Reporting and recordkeeping requirements.

1. **Reporting requirements for systems.** Except when a shorter reporting period is specified, the system shall report to the department the result of any test, measurement, or analysis required within the first ten days following the month in which the results are received or the first ten days following the end of the required monitoring period as stipulated by the department, whichever of these is shorter.

The system shall notify the department within forty-eight hours of the failure to comply with any primary drinking water regulations including failure to comply with monitoring requirements, except that failure to comply with the maximum contaminant levels for total coliform bacteria must be reported to the department no later than the end of the next business day after the system learns of the violation.

Community water systems required to comply with title 40, Code of Federal Regulations, part 141, subpart G shall report the results of all analyses to the department within thirty days of the system's receipt of the results. Subpart H systems shall comply with the reporting requirements for filtration and disinfection treatment set forth under title 40, Code of Federal Regulations, part 141, subparts H, P, T, and W. Community and nontransient noncommunity water systems shall comply with the reporting requirements for lead and copper set forth under title 40, Code of Federal Regulations, part 141, subpart I. Community, nontransient noncommunity, and transient noncommunity water systems using chlorine dioxide shall comply with the applicable reporting requirements for disinfectants, disinfection byproducts, and disinfection byproduct precursors set forth under title 40, Code of Federal Regulations, part 141, subparts L, U, and V. Community, nontransient noncommunity, and transient noncommunity water systems shall comply with the applicable reporting requirements for total coliform bacteria set forth under title 40, Code of Federal Regulations, part 141, subpart Y.

The system is not required to report analytical results to the department in cases when the department performed the analysis.

Within ten days of completing the public notification requirements set forth under title 40, Code of Federal Regulations, part 141, subpart Q for the initial public notice and any repeat notices, public water systems must submit to the department a certification that the system has fully complied with the public notification regulations. The public water system must include with this certification a representative copy of each type of notice distributed, published, posted, and made available to persons served by the system and to the media.

The system shall submit to the department, within the time stated in the request, copies of any records required to be maintained by the department or copies of any documents then in existence which the department is entitled to inspect under the provisions of state law.

2. **Reporting requirements for the department.** The department shall comply with the applicable reporting requirements set forth under title 40, Code of Federal Regulations, part 142.15.
3. **Recordkeeping requirements for systems.** Subpart H systems shall comply with the recordkeeping requirements for filtration and disinfection treatment set forth under title 40, Code of Federal Regulations, part 141, subparts H, P, T, and W. Community and nontransient noncommunity water systems shall comply with the recordkeeping requirements for lead and copper set forth under title 40, Code of Federal Regulations, part 141, subpart I. Community, nontransient noncommunity, and transient noncommunity water systems using chlorine dioxide shall comply with the applicable recordkeeping requirements for disinfectants, disinfection byproducts, and disinfection byproduct precursors set forth under title 40, Code of Federal Regulations, part 141, subparts L, U, and V. Community, nontransient noncommunity, and transient noncommunity water systems shall comply with the applicable recordkeeping requirements for total coliform bacteria set forth under title 40, Code of Federal Regulations, part 141, subpart Y. Community water systems shall retain copies of consumer confidence reports for no less than three years.

All public water systems shall retain on their premises or at a convenient location near their premises, the following additional records to document compliance with the remaining provisions of this chapter:

a. Bacteriological and chemical analyses. Records of bacteriological analyses and turbidity analyses shall be kept for not less than five years. Records of chemical analyses shall be kept for not less than ten years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

(1) The date, place, and time of sampling and the name of the person who collected the sample;

(2) Identification of the sample as to whether it was a routine distribution system sample, check sample, or raw or other special purpose sample;

(3) Date of analysis;

(4) Laboratory and person responsible for performing analysis;

(5) The analytical technique or method used; and

(6) The result of the analysis.

b. Corrective actions taken. Records of action taken by the system to correct violations shall be kept for a period of not less than three years after the last action taken with respect to the particular violation involved. Assessment forms and documentation showing a corrective action, as a result of an assessment, was completed must be kept for a period of not less than five years after completion of the assessment or corrective action.

c. Reports and communications. Copies of any written reports, summaries, or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local, state, or federal agency, shall be kept for a period not less than ten years after completion of the sanitary survey involved.

d. Variances and exemptions. Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than five years following the expiration of such variance or exemption.

e. Public notices and certifications. Copies of public notices issued pursuant to title 40, Code of Federal Regulations, part 141, subpart Q and certifications made to the department pursuant to title 40, Code of Federal Regulations, part 141.31 must be kept for three years after issuance.

f. Copies of monitoring plans developed pursuant to this part shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under subdivision a, except as specified elsewhere in this part.

4. **Recordkeeping requirements for the department.** The department shall comply with the applicable recordkeeping requirements set forth under title 40, Code of Federal Regulations, part 142.14.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03, 61-28.1-05; S.L. 2017, ch. 199, § 69

33.1-17-01-15. Variances and exemptions.

1. **General authority and limitations.** The department may grant a variance to a public water system from any treatment technique requirement except the treatment technique requirements for filtration and disinfection set forth under title 40, Code of Federal Regulations, part 141, subpart H. The department may grant an exemption to a public water system from any treatment

technique requirement except the disinfection treatment requirements set forth under title 40, Code of Federal Regulations, part 141, subpart H.

Until March 31, 2016, the department may grant a variance or an exemption to a public water system from any maximum contaminant level except the maximum contaminant level for coliform bacteria, at which time the total coliform maximum contaminant level is no longer effective.

Beginning April 1, 2016, the department may grant a variance or exemption to a public water system from any maximum contaminant level except the maximum contaminant level for E. coli bacteria.

2. **Variations.** Variations for public water systems serving ten thousand or more persons shall comply with section 1415(a) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-4(a)]. Variations for public water systems serving fewer than ten thousand persons shall comply with one of the following: section 1415(a) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-4(a)]; or section 1415(e) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-4(e)] and title 40, Code of Federal Regulations, part 142, subpart K.

In granting variations pursuant to section 1415(a) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-4(a)], the department identifies as best technology, treatment techniques, or other means generally available for achieving compliance with the maximum contaminant levels and treatment technique requirements those set forth under title 40, Code of Federal Regulations, part 142, subpart G. In granting variations pursuant to section 1415(e) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-4(e)], the department identifies as acceptable technologies those established under section 1412(b)(15) of the Federal Safe Drinking Water Act [42 U.S.C. 300g-1(b)(15)].

3. **Exemptions.** Exemptions for public water systems shall comply with section 1416 of the Federal Safe Drinking Water Act [42 U.S.C. 300g-5] and title 40, Code of Federal Regulations, part 142, subpart G.

4. **Procedures.** Actions to consider a variance or exemption may be initiated by the department or by a public water system through a written request to the department. The department shall act on any written variance or exemption request submitted by a public water system within ninety days receipt of the request. The department shall provide notice and opportunity for a public hearing before granting any variance and before prescribing a compliance schedule for any variance or exemption.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03, 61-28.1-05; S.L. 2017, ch. 199, § 69

33.1-17-01-16. Siting.

All new, altered, or expanded public water systems including wells and treatment and storage facilities necessary for the continuous operation of the system shall be located so as to:

1. Minimize potential breakdown as a result of floods, fires, or other disasters;
2. Except for intake structures, not be within the floodplain of a one hundred year flood;
3. Prevent contamination of the water supply by existing sources of pollution; and
4. Provide sufficient property for water supply facilities to allow proper operation, maintenance, replacement, and storage of system components.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-04

33.1-17-01-17. Plans and specifications.

1. **Submission of plans.** Plans and specifications shall be prepared for all new public water systems and for alterations or extensions to existing systems. Such plans and specifications, together with other pertinent information, shall be submitted to the department for review and approval prior to awarding of contracts. Such plans and specifications shall:
 - a. Be submitted in triplicate and in sufficient time to permit at least a two-week period for review and comment and with additional time to incorporate changes, if required;
 - b. Be presented in legible form and of sufficient scale to facilitate review;
 - c. Include supplemental information pertaining to basis of design, description of existing facilities, appraisal of future needs and such other information normally included in an engineer's report, as may be requested by the department; and
 - d. Be replaced by "as-built" plans when change orders result in major changes in the facilities.
2. **Submission of revised plans, change orders, and addendums.** Any deviation from the approved plans and specifications, or use of alternate equipment, which would affect capacity, hydraulic conditions, operating units, the functioning of the water treatment process or distribution system, or the quality of water to be delivered will require department approval prior to contract for alternate equipment or any construction which is affected by such change. Revised plans and specifications, change orders, or addendums, along with pertinent supplemental information, are to be submitted to the department for review and approval.
3. **Approval of plans.** Plans and specifications reviewed by the department will be approved only when such plans and specifications fully meet and comply with existing statutes and such standards and guidelines as have been or may be established by the department.
4. **Compliance with plan approval.** Systems shall be constructed in accordance with the plans, specifications, and applicable change orders approved by the department. The department reserves the right to remove from service all or any part of a system found not to be constructed in accordance with approved plans, specifications, or change orders, or for which plans, specifications, or change orders were not approved.
5. **Operation and maintenance manual.** An operation and maintenance manual shall be prepared and supplied by the appropriate party to new or modified water supply facilities or systems. A copy of this manual shall be submitted to the department for review prior to initial operation of the new or modified facility or system.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03, 61-28.1-04; S.L. 2017, ch. 199, § 69

33.1-17-01-18. Operation and maintenance.

Public water systems shall be supervised by competent personnel and modified, operated, and maintained in accordance with guidelines that may be developed or amended by the department. North Dakota Century Code chapter 23.1-07 required certified operators for all public water systems except those that serve other than year-round residents and meet all of the following conditions:

1. The water supply is obtained solely from ground water sources that the department has determined are not under the direct influence of surface water.
2. Treatment, if provided, consists strictly of disinfection, fluoridation, sequestration, corrosion control, or other processes that involve simple chemical addition and minor operational control.
3. The water supply system is not required by the federal Safe Drinking Water Act or its implementing regulations to be operated by qualified personnel.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-19. Protection of public water systems.

1. Cross-connection control.

- a. Cross connections are prohibited except when and where, as approved by the authority having jurisdiction, suitable protective devices are installed, tested, and maintained to ensure proper operation on a continuing basis.
- b. A system shall be designed, installed, and maintained in such a manner as to prevent nonpotable liquids, solids, or gases from being introduced into the water through cross connections or any other piping connections to the system.

2. Interconnections.

- a. Interconnection between two or more systems shall be permitted only with the written approval of the department.
- b. Interconnection between a nonpublic and public water system shall not be permitted unless specifically approved in writing by the department.

3. Return of used water prohibited. Water used for cooling, heating, or other purposes shall not be returned to the system. Such water may be discharged into an approved drainage system through an airgap or may be used for nonpotable purposes.

4. Products in contact with water. All products that may come into contact with water intended for use in a public water system must meet American national standards institute/national sanitation foundation international standards 60 and 61. Suppliers of water for public water systems may not willfully introduce or permit the introduction of a product into the public water system which has not first been determined to meet these standards. At the discretion of the department, suppliers of water for public water systems shall compile and maintain on file for inspection by the department a list of all products used by the system. Prior to using a product not on the list, suppliers of water for public water systems shall either determine that the product meets appropriate American national standards institute/national sanitation foundation international standards or notify the department of the type, name, and manufacturer of the product. A product will be considered as meeting these standards if so certified by an organization accredited by the American national standards institute to test and certify such products.

5. Used materials. Containers, piping, or materials which have been used for any purpose other than conveying potable water shall not be used.

6. Water storage structures. Finished water storage structures shall have a watertight cover which excludes the entrance of birds, animals, insects, and excessive dust. Beginning

February 16, 1999, public water systems shall not begin construction of uncovered finished water storage facilities.

7. **Turbidity control.** Subpart H systems that provide conventional filtration treatment or direct filtration shall develop individual filter profiles, perform individual filter self-assessments, and arrange for the completion of comprehensive performance evaluations as set forth under title 40, Code of Federal Regulations, subparts P and T. At the direction of the department, systems that are required to conduct a comprehensive performance evaluation shall arrange for the completion of a full composite correction program and implement followup recommendations that result from the composite correction program. Comprehensive performance evaluations and composite correction programs shall be conducted by a party other than the system which is approved by the department.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

33.1-17-01-20. Ground water system - Source requirements.

In addition to the remaining provisions of this chapter, public water systems utilizing ground water sources shall comply with the monitoring and treatment technique requirements and undergo sanitary surveys as set forth under title 40, Code of Federal Regulations, part 141, subpart S. This applies to public water systems that are consecutive users but not to subpart H systems and systems that combine all of their ground water with surface water prior to treatment.

History: Effective _____, 2018.

General Authority: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.1-03; S.L. 2017, ch. 199, § 69

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-18 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-18

WATER WELL CONTRACTORS

Chapter

33.1-18-01 Water Well Construction and Water Well Pump Installation

33.1-18-02 Ground Water Monitoring Well Construction Requirements

CHAPTER 33.1-18-01

WATER WELL CONSTRUCTION AND WATER WELL PUMP INSTALLATION

Section

33.1-18-01-01 Responsibility

33.1-18-01-02 Definitions

33.1-18-01-03 Plans and Specifications

33.1-18-01-04 Location of Wells

33.1-18-01-05 Protection of Ground Water Sources

33.1-18-01-06 General Well Construction Requirements

33.1-18-01-07 Pump Installation for Water Wells

33.1-18-01-08 Storage Tanks

33.1-18-01-09 Materials for Water Distribution

33.1-18-01-10 Cross-Connection Control

33.1-18-01-01. Responsibility.

It is the responsibility of any person, partnership, association, or corporation engaged in the business of construction of water wells, the installation of water well pumps, pitless units, or other appurtenances, or both, or drilling of geothermal systems, to comply within the meaning of this chapter pursuant to North Dakota Century Code chapters 23.1-01, 43-35, and 61-28.1.

A person, partnership, association, or corporation may not engage in the business of water well construction, the installation of water well pumps, pitless units, or other appurtenances, or both, or drilling of geothermal systems, unless a certified water well contractor, water well pump and pitless unit installer, or geothermal system driller is in charge.

The certified water well contractor, water well pump and pitless installer, or geothermal system driller in charge shall provide inspection and supervision of all water well construction activities, installation of water well pumps, pitless units, or other appurtenances, or both, or drilling of geothermal systems.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19; S.L. 2017, ch. 199, § 45

33.1-18-01-02. Definitions.

For the purpose of this chapter, the following definitions shall apply:

1. "Abandoned well" means a well whose use has been permanently discontinued.
2. "Annular space" means the opening between a well hole excavation and the well casing or curb, or between a casing pipe and a liner pipe.
3. "Appurtenances" means valves, meters, taps, gauges, or other devices required for adequate control or measurement of the well output.
4. "Aquifer" means a water-bearing formation that transmits water in sufficient quantities to supply a well.
5. "Casing" shall mean the pipe installed in the drill hole to give unobstructed access to the water-bearing formation.
6. "Constructing" a well includes boring, digging, drilling, or excavation in installing casings, well screens, and other appurtenances.
7. "Contamination" means alteration of the physical, chemical, or biological quality of the water so that it is harmful or potentially injurious to the health of the users or for the intended use of the water.
8. "Department" means the department of environmental quality.
9. "Disinfection" means the killing of infectious agents outside the body by chemical or physical means.
10. "Drawdown" means the extent of lowering the water surface in a well and of the water table adjacent to the well, resulting from the discharge of water from the well by pumping or natural flow.
11. "Drilling" means making any opening in the earth's surface by drilling, boring, or otherwise, and includes inserting any object into any part of the earth's surface for the purpose of obtaining an underground water supply except drainage tiles or similar devices designed primarily to improve land by removing excess water.
12. "Established ground surface" means the permanent elevation of the surface of the ground at the site of the well.
13. "Filter pack" means a clean sand or sand and gravel material of selected grain size and gradation which is installed in the annular space between a well hole excavation and the outside of the well screen for the purpose of preventing formation material from entering the screen.
14. "Geothermal system driller" means any person who is certified to conduct the business of drilling, boring, or excavating for the purpose of constructing or substantially modifying a geothermal energy extraction facility.
15. "Ground water source" means all water obtained from dug, drilled, bored, or driven well, infiltration lines, and springs.

16. "Grout" or "grouting material" means any stable impervious bonding material which is capable of providing a watertight seal between the casing and the formation throughout the depth required to protect against objectionable matter and which is reasonably free of shrinkage.
17. "Liner pipe" means a pipe installed inside a completed and cased well for the purpose of sealing off undesirable water or for repairing ruptured or punctured casing or screens.
18. "Pitless adapter" means a commercially manufactured device designed for attachment to a well casing and is so constructed as to prevent the entrance of contaminants into the well or potable water supply, conduct water from the well below the frostline to prevent freezing, and provide full access to the water system components within the well.
19. "Pitless unit" means a factory-assembled device with cap which extends the upper end of a well casing to above grade and is so constructed as to prevent the entrance of contaminants into the well or potable water supply, conduct water from the well below the frostline to prevent freezing, and provide full access to the well and the water system components within the well.
20. "Potable water" means water free from impurities in amounts sufficient to cause disease or harmful physiological effects, with the bacteriological and chemical quality conforming to applicable standards.
21. "Pressure tank" or "hydropneumatic tank" means a closed water storage container constructed to operate under a designed pressure rating to modulate the water system pressure within a selected range.
22. "Private water supply" means one that is not for public use.
23. "Public water supply" means a water supply connected to at least fifteen service connections or regularly serves an average of twenty-five persons daily, sixty days out of the year.
24. "Pumps" and "pumping equipment" means any equipment or materials utilized or intended for use in withdrawing or obtaining ground water for any use, including, without limitation, seals and tanks, together with fittings and controls.
25. "Repair" means any action which results in a breaking or opening of the well seal or replacement of a pump.
26. "Shall" means mandatory compliance with all aspects of the rules and regulations for water well construction and water well pump installation.
27. "Should" means provisions which are not mandatory but which are recommended or desirable procedures or methods. Deviation from the rules and regulations for water well construction and water well pump installation is subject to individual consideration.
28. "Static water level" means the elevation of the surface of the water in a well when no water is being discharged therefrom.
29. "Water well contractor" means any person who is certified to conduct the business of well drilling under the provisions of North Dakota Century Code chapter 43-35.

30. "Water well pump and pitless unit installer" means any person who is certified to conduct the business of installing water well pumps and pitless units under the provisions of North Dakota Century Code chapter 43-35.
31. "Well development" means the general process to achieve sand-free water at the highest possible well capacity.
32. "Well seal" means an approved arrangement or device used to cap a well or to establish and maintain a junction between the casing or curbing of a well and the piping or equipment installed therein, the purpose or function of which is to prevent pollutants from entering the well at the upper terminal.
33. "Well vent" means an outlet at the upper terminal of the well casing to allow equalization of air pressure in the well and escape of toxic or inflammable gases.
34. "Wells" means any artificial opening or artificially altered natural opening however made by which ground water is sought or through which ground water flows under natural pressure or is artificially withdrawn; provided, that this definition does not include a natural spring, stock ponds, or holes drilled for the purpose of exploration for production of oil, gas, gravel, or other minerals.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-03. Plans and specifications.

No public water well shall be constructed or modified, or water well pump, pitless unit, or other appurtenances be installed without prior approval of plans and specifications. Plans and specifications shall be submitted to the department for review prior to construction. Note chapter 33.1-03-08. The plans and specifications shall include:

1. Proposed well location.
2. Location and depths of existing wells, location of septic tanks, absorption fields, sewers, barnyards, feedlots, landfills, and high water marks of lakes or streams with a radius of five hundred feet [152.4 meters].
3. Elevation of highest known flood levels, upper terminal of well casing, floor of structure, and outside grade.
4. A schematic drawing of the well construction showing diameter and depth of drill holes, casing and liner diameters and depths, grouting depths, and other details as necessary to completely describe the proposed well.
5. Certification that the state engineer, North Dakota state water commission, has issued a conditional water permit for the beneficial use of water from the well to be constructed, if such a permit is required pursuant to North Dakota Century Code section 61-04-02.

Routine maintenance and repair does not require submission of plans and specifications.

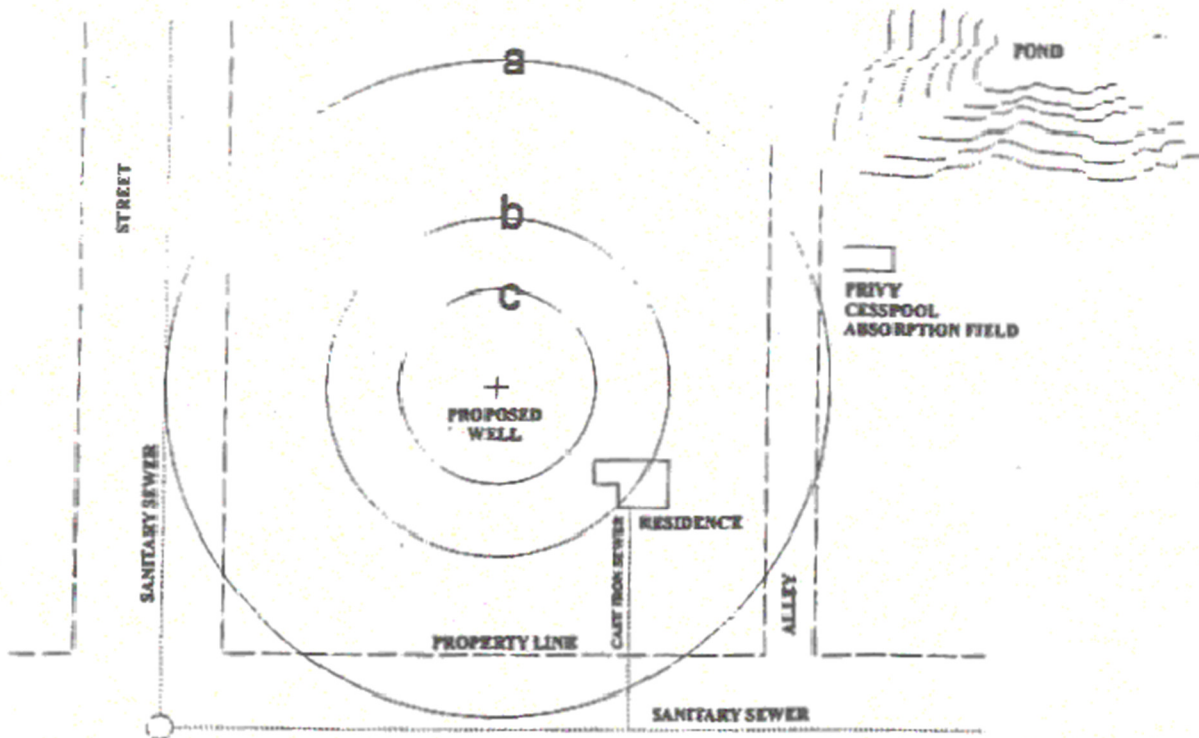
History: Effective _____, 2018.

General Authority: NDCC 43-35-19; S.L. 2017, ch. 199, § 1

33.1-18-01-04. Location of wells.

1. Relation to sources of contamination. Determination of minimum lateral distances of a well from potential sources of contamination, involves evaluation of the character and location of the sources of contamination, types of geologic formations, depth to the aquifer, effect on ground water movement by well pumping, and possibilities of flooding of the site by surface waters.

Based on experience, accepted minimum lateral distances for some common sources of pollution with respect to a well have been established. The lack of specific distances for other possible sources of contamination such as refuse disposal sites, excavations, waste treatment facilities, buried oil and gasoline storage tanks, improperly constructed wells and cisterns, etc., does not minimize their potential hazards.



The site should be on high ground and be:

- a. At least one hundred feet [30.48 meters] (fifty feet [15.24 meters] for private wells) from privy pits, cesspools, septic tanks, absorption fields, barnyards, feedlots, high water marks of lakes, streams, sloughs, ponds, etc., when well is constructed in unconsolidated soils with filtering properties.
- b. At least thirty feet [9.14 meters] from sewerlines.
- c. At least ten feet [3.05 meters] from basements or pits.

d. At least twenty feet [6.1 meters] from overhead powerlines and other hazardous devices. Note section 24.1-02-01-03.

Greater distances are always preferable and often necessary, depending upon soil conditions. When wells are constructed in consolidated formations, care must be taken in locating the wells as pollutants have traveled great distances in such formations.

2. **Relation to buildings.** When a well must be located adjacent to a building, it shall be located so that the centerline of the well extended vertically will clear any projection from the building by not less than two feet [60.96 centimeters].

Every well shall be reasonably accessible for proper repair, cleaning, testing, inspection, or other attention as may be necessary.

The well casing shall not extend through nor shall the top of the well casing or any other well opening terminate in the basement of any building or in a pit, room, or other space which is below ground surface.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19; S.L. 2017, ch. 199, § 45

33.1-18-01-05. Protection of ground water sources.

1. **Minimum protective depths of wells.** All wells shall be watertight to exclude contamination. Wells shall be designed to seal off formations that are or may be contaminated or undesirable.

Unless approved otherwise by the department, the annular space between a well hole excavation and the outside of the well casing shall be filled with neat cement grout, high-solids bentonite clay grout, bentonite chips, or bentonite tablets at least one and one-half inches [3.81 centimeters] in thickness from a depth of not less than thirty feet [9.1 meters] to the ground surface or the upper end of the well casing if a pitless unit or adapter is installed. Wells with a depth of thirty feet [9.1 meters] or less shall be grouted from within two feet [60.96 centimeters] of the top of the well screen to the ground surface or the upper end of the well casing if a pitless unit or adapter is installed. Greater depths are preferable and may be required for specific installations as determined by review of the plans and specifications.

The annular space of wells constructed in unconsolidated formations without overlying confining beds and static water levels less than thirty feet [9.1 meters] below the ground surface shall be filled with neat cement grout, high-solids bentonite clay grout, bentonite chips, or bentonite tablets at least one and one-half inches [3.81 centimeters] in thickness from the static water level or a depth of not less than ten feet [3.0 meters], whichever is greater, to the ground surface or the upper end of the well casing if a pitless unit or adapter is installed.

Driven well casing may, when conditions warrant, be installed without grouting.

2. **Required protection for various sources.**

a. **Radial collector wells.** The location of all caisson construction joints and porthole assemblies shall be indicated. The caisson wall shall be substantially reinforced.

Radial collectors shall be in areas and at depths approved by the department. Provisions shall be made to assure minimum vertical rise. The top of the caisson shall be covered with a watertight floor. All openings in the floor shall be curbed and protected from entrance of foreign material. Pump discharge piping shall not be placed through caisson walls.

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- b. Dug or bored wells. Dug or bored wells greater than two feet [60.96 centimeters] in diameter shall be developed only where geological conditions preclude the development of a satisfactory drilled well.

Every dug or bored well shall have a continuous watertight casing. The section of casing in the producing zone serving as the well screen shall readily admit water and be structurally sound to withstand external pressures.

The open space between the excavation and the installed casing shall be sealed with neat cement grout, high-solids bentonite clay grout, bentonite chips, or bentonite tablets.

The watertight casing shall extend at least twelve inches [30.48 centimeters] above finished ground surface. A cover slab at least four inches [10.16 centimeters] thick, adequately reinforced and having a diameter sufficient to overlap the lining by two inches [5.08 centimeters] shall be provided. The slab shall be constructed without joints.

The top of the slab shall be sloped to drain to all sides and a watertight joint made where the slab rests on the well casing using cement mortar or a mastic compound.

A manhole, if installed, shall be provided with a curb cast in the slab and extending at least four to six inches [10.16 to 15.24 centimeters] above the slab. The manhole shall have a watertight overlapping cover extending down around the curb by at least two inches [5.08 centimeters].

Adequate sized pipe sleeve or sleeves shall be cast in place in the slab to accommodate the type of pump or pump piping proposed for the well.

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- c. Infiltration wells. Infiltration wells may be considered where geological conditions preclude possibility of developing an acceptable drilled well. The area around the well shall be under the control of the water purveyor for a distance acceptable to or required by the department. The flow in the lines shall be by gravity to a collecting well. The water shall be continuously chlorinated to assure bacterial purity.

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- d. Flowing wells. The construction of flowing wells shall be in compliance with North Dakota Century Code chapter 61-20.

The construction of flowing wells shall be such that the flow from them can be controlled. Well casing shall be installed, and the annular space grouted with neat cement to form a tight seal. The neat cement grout shall extend upward from within twenty feet [6.1 meters] of the top of the aquifer to the ground surface or the upper end of the well casing if a pitless unit or adapter is installed.

Well casings shall be joined in a watertight manner. Flow control should consist of valved pipe connections, watertight pump connections, or receiving reservoirs set at an elevation corresponding to the artesian head.

- e. Existing wells. The department shall be consulted for requirements concerning the reconstruction of existing wells.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-06. General well construction requirements.

1. **Construction water.** Water used in the drilling process shall be obtained from a source which will not result in contamination of the well. Chlorination of the water with an initial dosage of not less than fifty milligrams per liter (one gallon [3.78 liters] of laundry bleach or 0.6 pounds [1.32 kilograms] of calcium hypochlorite per one thousand gallons [3.78 kiloliters] of drilling water) is recommended.

Waters from surface sources must be chlorinated with a minimum dosage of one hundred milligrams per liter (two gallons [7.56 liters] of laundry bleach or 1.2 pounds [2.64 kilograms] of calcium hypochlorite per one thousand gallons [3.78 kiloliters] of drilling water).

2. Ferrous well casing.

- a. **General.** Casing and liner pipe of wrought iron or steel through ten inches [25.4 centimeters] in diameter shall be prime pipe meeting current American Society for Testing and Materials Schedule 40, or equivalent specifications. Larger diameter pipes shall have a minimum wall thickness of three hundred seventy-five thousandths of an inch [0.952 centimeter].

All casing shall have additional thickness and weight if standard thickness is not considered sufficient to assure reasonable life expectancy of the well or be capable of withstanding forces to which they are subjected.

- b. **Drive shoe.** Pipe that is to be driven shall be equipped with a drive shoe or other device approved by the department.

- c. **Joints.** Casing and liner pipe joints shall be properly welded or threaded.

3. Nonferrous well casing.

- a. **General.** Pipe other than wrought iron or steel must be adaptable to the stresses to which they will be subjected during and after installation and to the corrosiveness of the water.

- b. **Thermoplastic well casing.** Thermoplastic well casing shall conform with American Society for Testing and Materials Specification F480-81 or latest revision as follows:

- (1) Minimum standard dimension ratio shall be twenty-one for casings less than sixteen inches [40.64 centimeters] in diameter. Minimum standard dimension ratio shall be twenty-six for casings sixteen inches [40.64 centimeters] in

diameter or larger. Casings with a lower standard dimension ratio (additional thickness) must be used when the minimum standard dimension ratio is not capable of withstanding the stresses encountered during and after installation.

(2) Minimum pipe stiffness shall be two hundred twenty-four pounds/foot [inch · inch] (kiloneutron/[meter · meter]) when tested according to section 5.4.1 of American Society for Testing and Materials Specification F480.

(3) All casing five inches [12.7 centimeters] and larger shall be tested for impact resistance and meet or exceed IC-1 impact classification according to section 6.5 and table 6 of American Society for Testing and Materials Specification F480.

c. Other materials. Other well casing materials that may be proposed shall carry the seal of the national sanitation foundation and be approved in writing by the department prior to installation.

4. **Packers.** Packers shall be of a material that will not impart taste, odors, toxic substances, or bacterial contamination to the water in the well.

5. **Screens.** Screens must be constructed of corrosion-resistant material and sufficiently strong to withstand stresses encountered during and after installation. Screen slot openings, screen length, and screen diameter should be sized and designed to provide sufficient open area consistent with strength requirements to transmit sand-free water at a capacity at least equal to one and one-half times the capacity of water anticipated. Screen slot size should be based on sieve analysis of formation samples.

Screens should be installed so that exposure above pumping level will not occur. A screen must be attached or connected to the casing by a threaded, solvent-welded, or welded joint or by threaded fasteners or a nontoxic packer. Solvent-welded joints should not impart taste, odors, toxic substances, or bacterial contamination to the water in the well.

6. **Filter pack.** Material used as a filter pack shall be sand or sand and gravel that is free of foreign material, properly sized, washed, and then disinfected prior to or during placement. Provisions for prevention of leakage of grout into the filter pack or screen shall be provided.

7. **Well development.** Every well shall be developed prior to yield and drawdown testing. Well development includes procedures to apply physical energy to the screen and aquifer formation adjacent to the well. After development, the well should produce sand-free water at a capacity at least equal to one and one-half times the capacity of water anticipated.

8. **Yield and drawdown test.** Every well should be tested for yield and drawdown. The test method to be followed should be clearly outlined in the specifications. The test pump should have a maximum capacity at least equal to one and one-half times the capacity of water anticipated. The test pump should be able to operate continuously until the rate of decline of the pumping water level has stabilized. Test data to be recorded should include:

a. Static water level.

- b. Pumping rate.
- c. Drawdown during test.
- d. Recovery water levels.
- e. Depth of pump setting.

Duration of the test shall be determined with due consideration given to pumping of sand, clarity of water pumped, and the obtaining of a representative sample of water for chemical analysis.

- 9. **Chemical conditioning.** When chemical treatment of a public well is proposed, the method of conditioning shall be included in the specifications. The equipment, chemicals, and inhibitors to be used, the method of testing for chemical residuals, and the disposal of waste shall be indicated.

10. **Grouting requirements.**

- a. Neat cement grout. The mixture should consist of one sack of cement (ninety-four pounds [42.64 kilograms]) to not more than six gallons [22.71 liters] of clean water. Bentonite additives up to five pounds [2.27 kilograms] per sack of cement to increase fluidity may be used. Pozzuolana additives up to thirty-three pounds [14.97 kilograms] per sack of cement may be used.

- b. Heat of hydration. Care must be used when grouting thermoplastic well casing with neat cement grout. Heat caused by hydration during curing of the cement may cause weakening of the well casing. High peak temperatures may be minimized by adding sand or bentonite clay to the neat cement grout mixture to increase the curing time. The amount of sand or bentonite clay added to the neat cement grout may not exceed five pounds [2.27 kilograms] per sack of cement.

- c. High-solids bentonite clay grout. The mixture must consist of not less than three pounds [1.36 kilograms] of bentonite clay per gallon [3.79 liters] of clean water.

High-solids bentonite clay grout, bentonite chips, or bentonite tablets must be commercially prepared specifically for the purpose of sealing water wells. The use of bentonite drilling fluids as a grouting material is not permitted.

- d. Grouting guides. Casing that is to be grouted in the drill hole or annular opening shall be provided with sufficient guides welded to the casing to permit the unobstructed flow and uniform thickness of grout.

- e. Grout application. Grout material must be positively and accurately placed to fill all voids. All grouting should be performed by adding the mixture, from the bottom of the annular space upward, in one continuous operation, until the annular space is filled. Sufficient annular opening shall be provided to permit a minimum of one and one-half inches [3.81 centimeters] of grout around the casing, including couplings, if used.

Bentonite chips or tablets may be added from the top of the annular space to a maximum depth of thirty feet [9.1 meters] provided the grout material is positively and accurately placed to fill all voids and hydrated after placement.

11. **Plumbness and alignment.** Every well shall be tested for plumbness and alignment upon completion of construction. The casing shall be sufficiently plumb so as not to interfere with the installation and operation of the pump. (See recommended procedures in the appendix to this chapter.)

12. **Well construction data.** The water well contractor shall provide the North Dakota board of water well contractors with an accurate record of well construction data. Drill cuttings should be obtained at five-foot [1.52-meter] intervals, and at all pronounced changes in formation. Well construction data shall include an accurate record of the drill hole diameters and depths, assembled order of size and length of casings and liners, grouting depths, formations penetrated, water levels, location of blast shots, and pumping tests. Well construction report forms are available from the North Dakota board of water well contractors.

13. **Upper terminal of well.** The casing or pitless unit for all ground water sources shall project not less than twelve inches [30.48 centimeters] above the final ground elevation, the well cover slab, or pumphouse floor.

Sites subject to flooding shall have the top of the protective casing, pitless unit, the cover of every dug well, and the floor of the pumphouse at least two feet [60.96 centimeters] above the highest-known flood elevation and be surrounded by earthfill.

14. **Capping.** The well must be protected during construction. A properly fitted cap designed for the type of well casing installed shall be used to protect the well from surface contamination until pumping equipment is installed.

15. **Bacteriological and chemical quality of water.** Every new, modified, or reconditioned ground water source shall be thoroughly cleaned and disinfected after the completion of construction and again after the permanent pump has been installed. The certified water well contractor or pump and pitless unit installer in charge during well construction and pump installation shall advise the well owner that one or more water samples from the source should be submitted to an approved laboratory for bacteriological analysis and that the well should not be placed into service until satisfactory bacteriological results are obtained.

Wells intended for use by a public water system shall be sampled for bacteriological analysis and the following chemicals and not placed into service until the results are deemed by the department to comply with the primary drinking water standards established under the Safe Drinking Water Act: antimony, arsenic, barium, beryllium, cadmium, chromium, copper, cyanide, fluoride, lead, mercury, nickel, combined nitrate/nitrite, selenium, thallium, manganese, and sulfate. When it is established that the ground water is subject to continuous or intermittent contamination, or for public water systems that the ground water is under the direct influence of surface water, provisions for continuous disinfection will be required.

16. **Chemical quality of water.** Every new, modified, or reconditioned ground water source should be examined for its chemical characteristics by tests of a representative sample in a department or other approved laboratory. The samples should be collected and tested as soon as practical.

17. **Water level measurement.** Provisions should be made for periodic measurement of the static and pumping water levels in the completed well. The installation shall be made in such manner as to prevent the entrances of foreign material.

18. **Water supply wells, geothermal ground water and return wells, and special purpose water wells.** All wells designed as water supply wells, geothermal ground water or return wells, or special purpose water wells shall be constructed in accordance with this chapter.

Each well shall be protected at its upper terminal to preclude the entrance of foreign materials.

19. **Abandoned wells.** Any abandoned water wells, including test wells, uncompleted wells, and completed wells shall be sealed by restoring, as far as possible, the controlling geological conditions which existed before the wells were drilled.

Sealing of wells results in:

a. Elimination of physical hazards.

b. Prevention of contamination of ground water.

c. Conserving yield and hydrostatic head of aquifers.

d. Prevention of intermingling of desirable and undesirable waters.

Wherever feasible, the wells should be filled with concrete grout or other approved materials. (Note: recommended grouting procedures are in the appendix to this chapter.)

At no time shall any sewage or other contaminated or toxic materials be discharged into an abandoned well.

20. **Organic polymers.** The use of biodegradable organic polymers as a drilling fluid additive has resulted in persistent microbiological contamination of ground water supplies. Organic polymers shall be used only when approved in writing by the department for a specific well construction project.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-07. Pump installation for water wells.

1. **Pumphouse appurtenances.** The installation of necessary appurtenances for public wells shall be as illustrated in pump installation details contained in the diagrams attached to this chapter.

a. Floor drain. The pumphouse floor shall be watertight and shall slope away from the pump base. The pumphouse floor shall be provided with a floor drain discharging to a sump at least twenty-five feet [7.62 meters] from the well.

b. Vents. Provisions shall be made for venting the well casing to the atmosphere. There shall be no holes in the pump base which might allow wastewater or other

material to enter the well. A breather tube shall be installed of sufficient size to permit air to enter and leave the well freely with the changing of water elevation caused by starting and stopping the pump. The breather tube shall terminate in a full one-hundred-eighty-degree bend at least eighteen inches [45.72 centimeters] above the floor, securely screened with sixteen mesh wire screen. If the breather tube or a depth gauge line passes through the base of the pump or through the seal connection into the well, the hole about the tube shall be sealed.

- c. Water level measurement. An access plug for a measuring tape or an air line and drawdown gauge for determining location of the water level shall be installed during the installation of the pump on all public wells. Installation of permanent water level measuring equipment shall be made using corrosion-resistant materials firmly attached, in a vertical position, to the drop pipe or pump column in such a manner as to prevent entrance of foreign materials. The air line shall extend from the top of the well to several feet [meters] below the lowest anticipated water level. The length of the air line shall be accurately measured and the length recorded.

2. **Cutting of well casing.** No casing shall be cut off or cut into below ground level except to install a pitless unit or adapter.

3. **Pitless unit and adapter.**

- a. Pitless unit. Pitless units designed to replace a section of well casing must meet the standards of the national sanitation foundation or the water systems council and must:

- (1) Be factory fabricated from point of connection with the well casing to the unit cap or cover. The materials used must be durable, at least equal in quality to the well casing, to prevent excessive corrosion.
- (2) Form an unbroken extension of the well casing from the point of discharge to a point above ground level as specified for upper well terminals.
- (3) Have an inside diameter equal to or greater than the inside diameter of the well casing to facilitate work and repair on the well, pump, or well screen. Any deviation from this paragraph must be approved in writing by the department.
- (4) Conduct water from a well casing without exposing the well to contamination through openings in the casing.
- (5) Have access to the casing for disinfection of the well.
- (6) Be capped with a cover having a downward flange which will overlap the edge of the unit. The cover must be securely fastened to the unit and must be sufficiently snug to the unit to be verminproof or watertight if required.

The cover must provide for watertight entrance of electrical cables, vent piping, and an air line or a tap for wetted tape measurements of depth to water level of a well.

- (7) Be installed by threaded, welded, or compression flange gasketed connection to the cutoff casing. The threaded, welded, or compression flange gasketed connection to the cutoff casing must be watertight. If the connection to the casing is to be a field weld, the factory-assembled unit must be designed specifically for field welding.
- (8) Have all field connections between the pitless unit and the water service pipe threaded, flanged, or mechanical joint.
- b. Pitless adapter. Commercially manufactured clamp-on or weld-on pitless adapters for attachment to the exterior of a well casing may be installed when approved by the department. Pitless adapters must be installed according to manufacturer's specifications and meet the standards of the national sanitation foundation. A list of approved pitless adapters is available from the department.
 - (1) Pitless adapters must be constructed and installed so as to prevent the entrance of contaminants into the well or water supply through openings in the well casing.
 - (2) The pitless adapter must provide adequate clearance within the well to permit insertion and withdrawal of the pump and system components through the upper terminal of the well casing.
 - (3) The pitless adapter must be connected to the well casing with clamps-and-gasket or by welding and must be watertight. To assure a watertight connection between the pitless adapter and the well casing, care must be used in cutting the hole in the well casing, preferably with a hole-cutting saw. All burrs from the cutting process must be removed. Both the outside and the inside surfaces of well casing surrounding the hole must be smooth.
 - (4) A pitless cap or cover must enclose the upper terminal of the well casing. The cap, entrance of electrical cables, vent piping, air lines, etc., must be as specified for pitless units.
 - (5) All field connections between the pitless adapter and the water service pipe must be threaded, flanged, or mechanical joint.
 - (6) All other aspects of pitless adapter requirements must be as specified for pitless units.
- c. Freezing. Water service piping must be installed below recorded frost penetration. A minimum depth of seven feet [2.28 meters] below grade is recommended to prevent freezing.
- 4. **Over-the-well pumps.** Power-driven pumps located over a well shall be installed on a concrete base of sufficient height to permit the outside casing to extend one inch [2.54 centimeters] above the concrete base. On all public water wells, the annular opening between the drill hole and casing shall be filled with cement grout before the pump base and pumphouse floor are constructed. If the well is of the gravel wall type, the outer casing shall extend at least twelve inches [30.48 centimeters] above the pumphouse floor with suitable provisions made for adding gravel. The inner casing shall

extend one inch [2.54 centimeters] above the pump base. Note diagrams no. 1 and no. 2, pump installation details, in the diagrams attached to this chapter.

A sanitary well seal shall be installed at the top of the well casing to prevent the entrance of contaminated water or objectionable material.

5. **Pump column.** A separate pump column, suction or discharge pipe shall be installed inside the well casing in all instances, whether the well is to be pumped by suction, airlift, or deep well pump.

6. **Submersible pumps.** The discharge line installed inside of the well casing must meet the standards for ferrous or nonferrous well casing in subsections 2 and 3 of section 33.1-18-01-06. The discharge line shall leave the well at the top of the casing. The opening between the discharge line and casing or pipe sleeve shall be sealed watertight with an expanding rubber seal or equivalent device. When an underground discharge is desired, a properly installed pitless unit or, when approved by the department, a pitless adapter shall be used.

The electrical cable shall be firmly attached to the pump riser at intervals of twenty feet [6.10 meters] or less.

When a check valve is not part of the pump, a check valve shall be installed on the pump discharge line within the well.

A check valve on the pump discharge line is not required on nonpressurized wells for livestock use that would be damaged by freezing, when an airgap or other cross-connection control protection is provided.

7. **Offset pumps.** Pumps offset from public wells shall be located in an aboveground pumphouse or other building. All portions of suction lines buried below the ground surface between the well and the pump shall be enclosed in a protective pipe of standard thickness and be sealed watertight at both ends.

This requirement shall be considered satisfied if the suction line lies within a pressure discharge line.

Offset pumps for private wells may be located in a basement provided that the pumps and all suction pipes are elevated at least twelve inches [30.48 centimeters] above the floor.

8. **Hand pumps.** Hand pumps shall be of the force type equipped with a packing gland around the pump rod, a delivery spout which is closed and downward directed, and a one-piece bell-type base which is part of the pump stand or is attached to the pump column in a watertight manner.

The bell base of the pump shall be bolted with a gasket to a flange which is securely attached to the casing or pipe sleeve.

9. **Pump controls.**

a. **Public water wells.** Pump controls for public water wells must be installed in accordance with the manufacturer's recommendations as shown on approved plans and specifications.

b. Private water wells. Pump controls for private water wells should be installed in accordance with manufacturer's recommendations and must include:

(1) A pressure-activated pump switch.

(2) A thermal overload switch.

(3) A flow control orifice or a low water level cutoff switch on all pumps having an output in excess of the well capacity.

(4) A pressure relief valve on positive displacement pumps.

(5) The installation of necessary appurtenances for private water wells should be as illustrated in diagram no. 4 - pitless unit and appurtenances for private wells.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-08. Storage tanks.

1. **Public water systems.** Storage equipment for public water systems must be as shown on approved plans and specifications.

2. **Private water systems.** Storage equipment must be as follows:

a. All tanks must be certified under water system council standards for size and pressure.

b. Hydropneumatic tanks must have a working pressure rating in excess of the maximum system pressure but not less than seventy-five pounds per square inch [34.02 kilograms per 6.45 square centimeters].

c. All tanks must be coated or made of materials resistant to corrosion.

d. All tanks must be constructed of materials or coatings which are nontoxic.

e. All tanks must be provided with a means of draining.

f. Atmospheric storage tanks must be provided with a cover to prevent the entrance of unauthorized persons, dirt, or vermin. The cover must be vented with a return bend vent pipe having an area not less than the area of the downfeed riser pipe and the vent must be screened with corrosion-resistant screen having not less than fourteen and not more than twenty openings per linear inch [2.54 centimeters].

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-09. Materials for water distribution.

1. **Water service pipe.**

a. Public water systems. Water service pipe from the well to the point of entrance to a pumphouse or building must be as shown on approved plans and specifications.

b. Private water systems. Water service pipe from the well to point of entrance to a pumphouse or building must be made of copper, galvanized steel, or approved plastic. Approved plastic (polyvinyl chloride, polyethylene, or polybutylene) must have a minimum pressure rating of one hundred sixty pounds per square inch at seventy-three degrees Fahrenheit [11.25 kilograms per square centimeter at 22.8 degrees Celsius]. Copper tube, when used underground, may not be less than type L. All threaded ferrous pipe and fittings must be galvanized or cement-lined and, when used underground in corrosive soil or filled ground, must be coal tar enamel-coated and threaded joints must be coated and wrapped when installed.

All piping must comply with applicable standards for such piping. Polyvinyl chloride, polyethylene, and polybutylene pipe shall carry the seal of the national sanitation foundation.

Permeation through polyethylene and polybutylene pipes by organic contaminants (including petroleum byproducts) can occur resulting in contamination of water supplies. Where there is known contamination of soils by organics or a high probability that contamination of soils by organics may occur, it is recommended that polyethylene and polybutylene pipe not be used to construct water supply lines.

2. **Fittings.** The materials of which water supply system pipe fittings are made must be compatible with the type of piping materials used in the water supply system.

3. **Material strength.**

a. All materials used for water piping must be suitable for use with the maximum temperature, pressure, and velocity that may be encountered in the installation, including temporary increases and surges.

b. When the standards for the piping material used for hot and cold water distribution limit the working pressure or temperature to values lower than usually encountered, the relief valve may be set no higher than the limits of the standard.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

33.1-18-01-10. Cross-connection control - Backflow protection.

All wells discharging to sources of contamination, such as livestock watering tanks, must be provided with an approved backflow prevention device or an airgap to prevent the backflow or siphonage of contaminants into the well. The airgap should provide a minimum vertical distance between the potable water pipe outlet and the water surface of not less than twice the diameter of the outlet pipe. Greater distances are preferable.

Overflow lines from stock watering tanks or other sources of contamination may not discharge to the well.

Please consult the North Dakota state plumbing code for details.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19, 43-35-19.1; S.L. 2017, ch. 199, §§ 45, 46

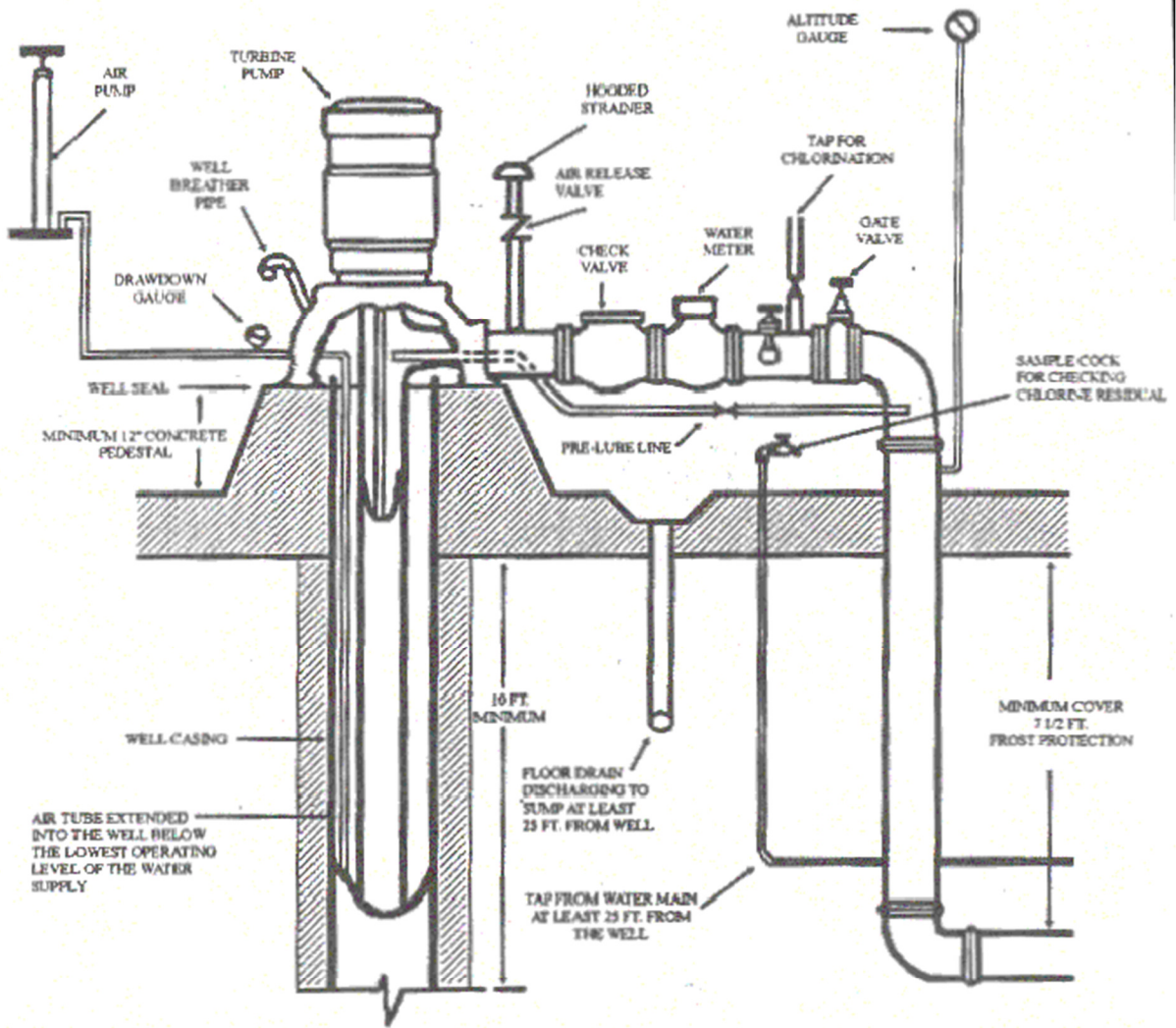


DIAGRAM NO. 1. TURBINE TYPE PUMP AND APPURTENANCES

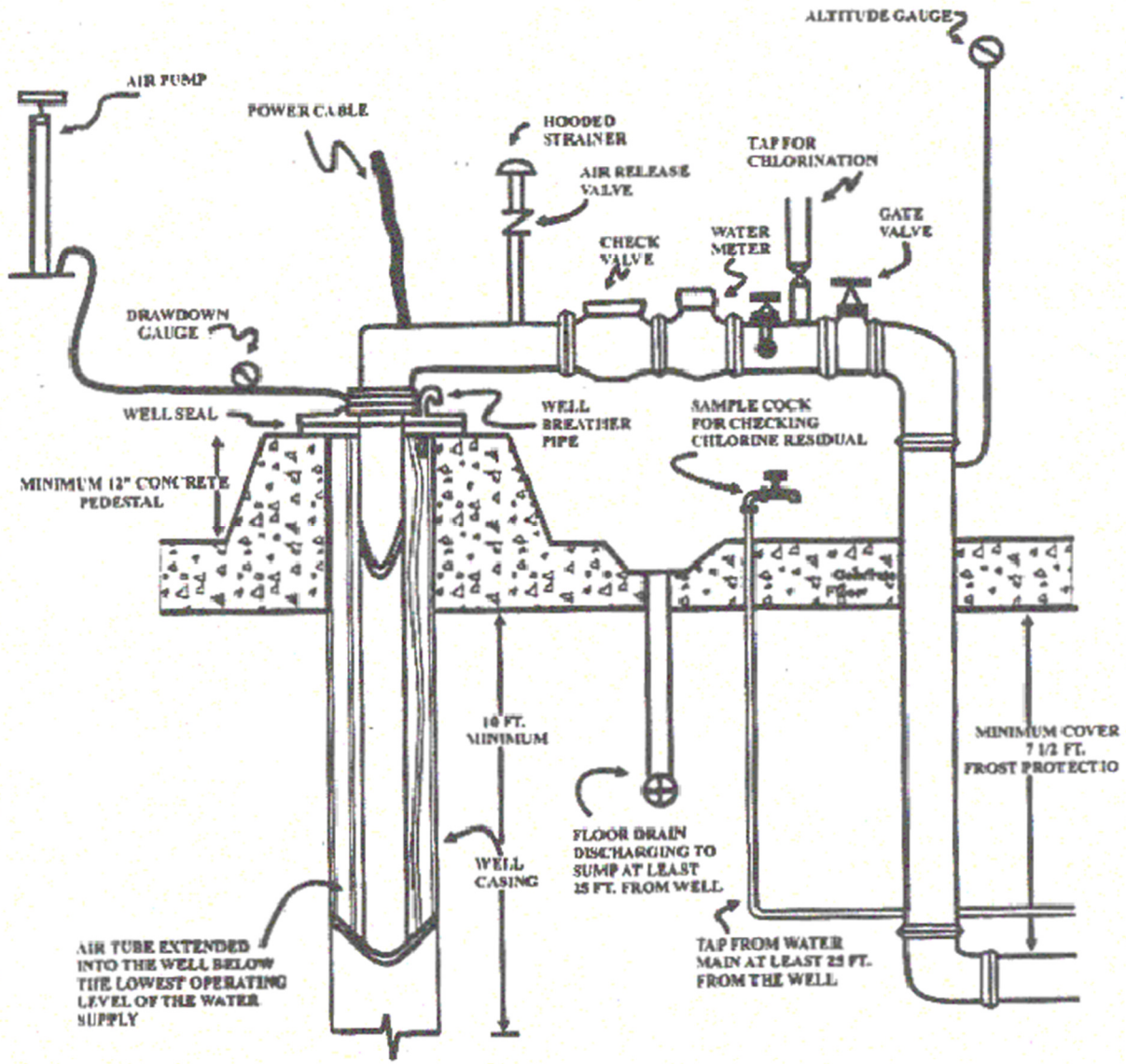


DIAGRAM NO. 2. SUBMERSIBLE TYPE PUMP AND APURTENANCES

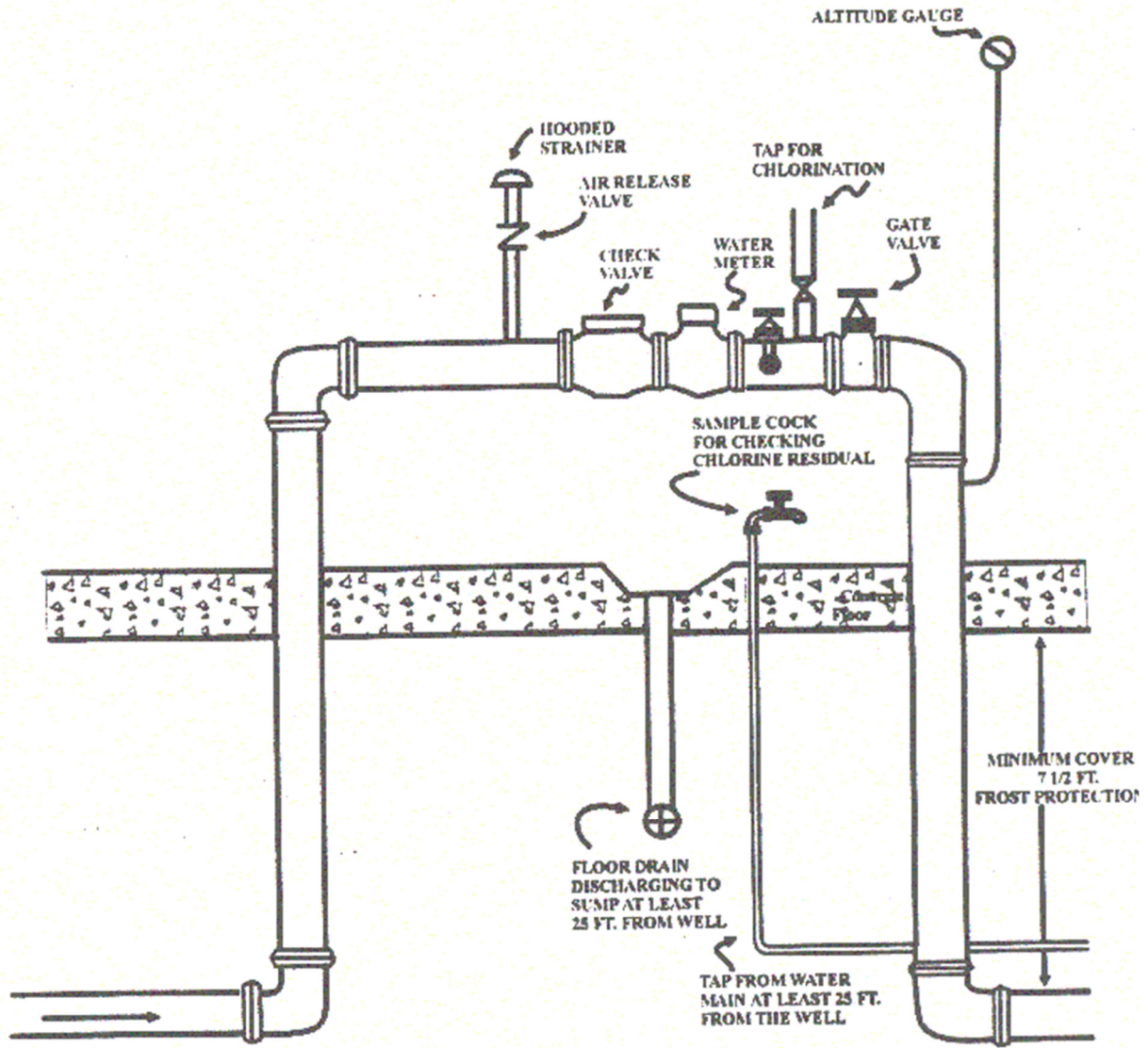


DIAGRAM NO. 3. PITLESS UNIT APPURTENANCES

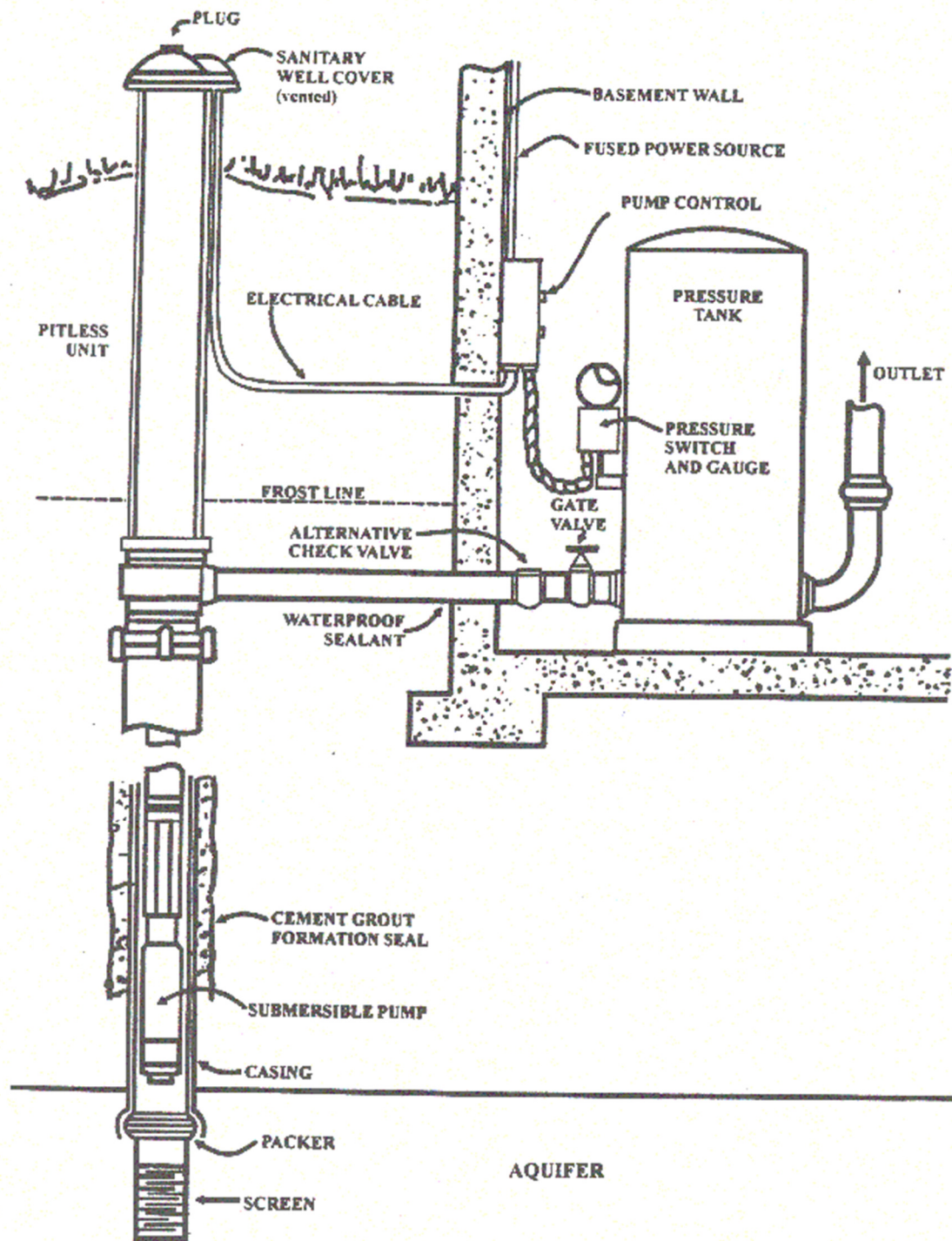


DIAGRAM NO. 4. PITLESS UNIT AND APPURTENANCES FOR PRIVATE WELLS

APPENDIX

I. WELL DISINFECTION

A. General.

Immediately after construction or repair, always disinfect with a strong chlorine solution of fifty to one hundred milligrams per liter. Materials used in construction or repair of a well are contaminated with dirt and bacteria and the water from a well is considered safe to drink only when laboratory tests show that no harmful bacteria are present.

B. Procedure.

1. Determine the amount of water in the well by referring to the table.
2. Add the amount of chlorine compound necessary to give a dosage of fifty milligrams per liter as indicated on the table, into the opening between the casing and the drop pipe. On new well construction, the chlorine should be added just before installation of the pumping equipment.
 - a. Chlorine tablets may be dropped in the top of the well and allowed to settle to the bottom.
 - b. Deep wells with high water levels may require that chlorine solutions be added through a hose inserted down the well casing to ensure proper diffusion of the chlorine.

Chlorine can destroy only the bacteria with which it comes in contact. Agitation of the water in the well may be required to assure thorough mixing. After adding the chlorine, start the pump and operate until the odor of chlorine is detected at the pump discharge.

3. The storage and distribution system should be disinfected along with the well. Open the house faucets and let the water run until the odor of chlorine is apparent.
4. Allow the chlorine solution to remain in the well and distribution system for a period of twenty-four hours. Pump the well and flush the distribution system to remove all traces of chlorine.
5. After pumping, collect a water sample and submit to a laboratory for a bacteriological analysis to assure the safety of the water supply. If contamination is shown to be still present in the water supply, the chlorination procedure should be repeated.
6. When time does not permit well disinfection by the procedure previously described, apply to the entire depth of the well a total volume of 50 mg/l chlorine solution at least four times greater than the volume of water in the well. Allow the chlorine solution to remain in the well for a period of at least two hours. Pump the well and flush the distribution system to remove all traces of chlorine.

QUANTITY OF DISINFECTANT REQUIRED TO GIVE A DOSE OF 50 MILLIGRAMS PER LITER CHLORINE

<u>Diameter of Well, Spring, or Pipe, in</u>	<u>Gallons of Water Per Foot of Water Depth</u>	<u>Ounces of Disinfectant Per 10-Ft. Depth of Water</u>	
		<u>65% Calcium</u>	<u>5 1/4% Sodium</u>

<u>Inches</u>		<u>Hypochlorite</u>	<u>Hypochlorite*</u>
<u>2</u>	<u>0.16</u>	<u>0.02</u>	<u>0.21</u>
<u>3</u>	<u>0.37</u>	<u>0.04</u>	<u>0.47</u>
<u>4</u>	<u>0.65</u>	<u>0.07</u>	<u>0.83</u>
<u>5</u>	<u>1.00</u>	<u>0.10</u>	<u>1.30</u>
<u>6</u>	<u>1.47</u>	<u>0.15</u>	<u>1.87</u>
<u>8</u>	<u>2.61</u>	<u>0.27</u>	<u>3.32</u>
<u>10</u>	<u>4.08</u>	<u>0.31</u>	<u>5.19</u>
<u>12</u>	<u>5.88</u>	<u>0.60</u>	<u>7.47</u>
<u>18</u>	<u>13.22</u>	<u>1.36</u>	<u>16.80</u>
<u>24</u>	<u>23.50</u>	<u>2.41</u>	<u>29.87</u>
<u>36</u>	<u>52.88</u>	<u>5.43</u>	<u>67.20</u>
<u>48</u>	<u>94.01</u>	<u>9.65</u>	<u>119.47</u>

*Sodium Hypochlorite, also known as Bleach, Clorox, etc., can be purchased at most drug and grocery stores.

One heaping tablespoon of 65% calcium hypochlorite = approximately 1/2 oz.

Six (6) 65% calcium hypochlorite tablets = approximately 1 oz.

Heavy concentrations of chlorine on or near the well screen with waters very high in iron and/or iron bacteria may result in oxidation of iron on the well screen. Efficiency of the well screen and well output could be reduced under such conditions.

II. LABORATORY SERVICE. Chemical and microbiological laboratory service is provided by the department of environmental quality laboratory located at 1205 Avenue A West, Bismarck, North Dakota. Mailing address is:

Department of Environmental Quality
Division of Laboratory Services
P.O. Box 937
Bismarck, ND 58502

Microbiological laboratory service is available from:

First District Health Unit
801 11th Avenue SW
P.O. Box 1268
Minot, ND 58702-1268

Southwestern District Health Unit
2869 Third Avenue West
Dickinson, ND 58601

Fargo Cass Public Health
Environmental Laboratory
435 14th Avenue South
Fargo, ND 58103

Grand Forks Environmental
Laboratory
503 South Fourth Street
Grand Forks, ND 58201

III. RECOMMENDED PROCEDURES.

A. Plumbness and Alignment.

Every public water well, before being officially accepted, should be tested for plumbness and alignment. The test method to be followed should be clearly stated in the specifications. As a minimum, a forty-foot [12.19-meter] section of pipe, or rigid dummy of the same length, having an outside diameter not more than one-half inch [12.7 millimeters] smaller than the diameter of the casing or hole being tested, shall move freely throughout the length of the casing or hole to the lowest anticipated pump setting. The well should not vary from the vertical in excess of two-thirds of the smallest inside diameter of that part of the well being tested, per one hundred feet [30.48 meters] of depth.

B. Abandoned Wells.

For detailed procedures for abandoning wells, see Section A1-13, Sealing Abandoned Wells, AWWA Standards for Deep Wells, A100-66 or later amendments prepared by the American Water Works Association and the National Water Well Association.

C. Springs.

Springs should be considered as a water supply only when it is not possible to develop an acceptable well. Springs shall be protected from entry of surface water and should be housed in a permanent structure. Continuous chlorination of springs is recommended to assure the bacterial purity of the water supply.

D. Continuous Chlorination of Public Well Water Supplies.

Continuous chlorination is recommended for the safeguarding of public well water supplies. Chlorination not only assists in maintaining the bacterial purity of the water, but also eliminates the growth of taste-and-odor-producing nuisance organisms.

E. Livestock Wells.

A check valve on the pump discharge line is not required on nonpressurized wells for livestock use that would be damaged by freezing. The pump discharge line shall have a minimum airgap equal to twice the effective diameter of the discharge line to prevent backflow or siphonage into the well to prevent contamination of the well.

IV. MEASUREMENT OF WATER WELL DRAWDOWN AND SPECIFIC CAPACITY.

Pumping tests of water supply wells can serve many purposes. Properly planned and conducted tests will reveal information about the performance and efficiency of the well being pumped. In addition, from the data obtained, calculations can be made which interpret ground water aquifer performance.

Measuring each well for pump and well yield, depth to water level, drawdown, and specific capacity should be done on a routine basis. These test results should be compared with previous tests to estimate current well and/or aquifer conditions.

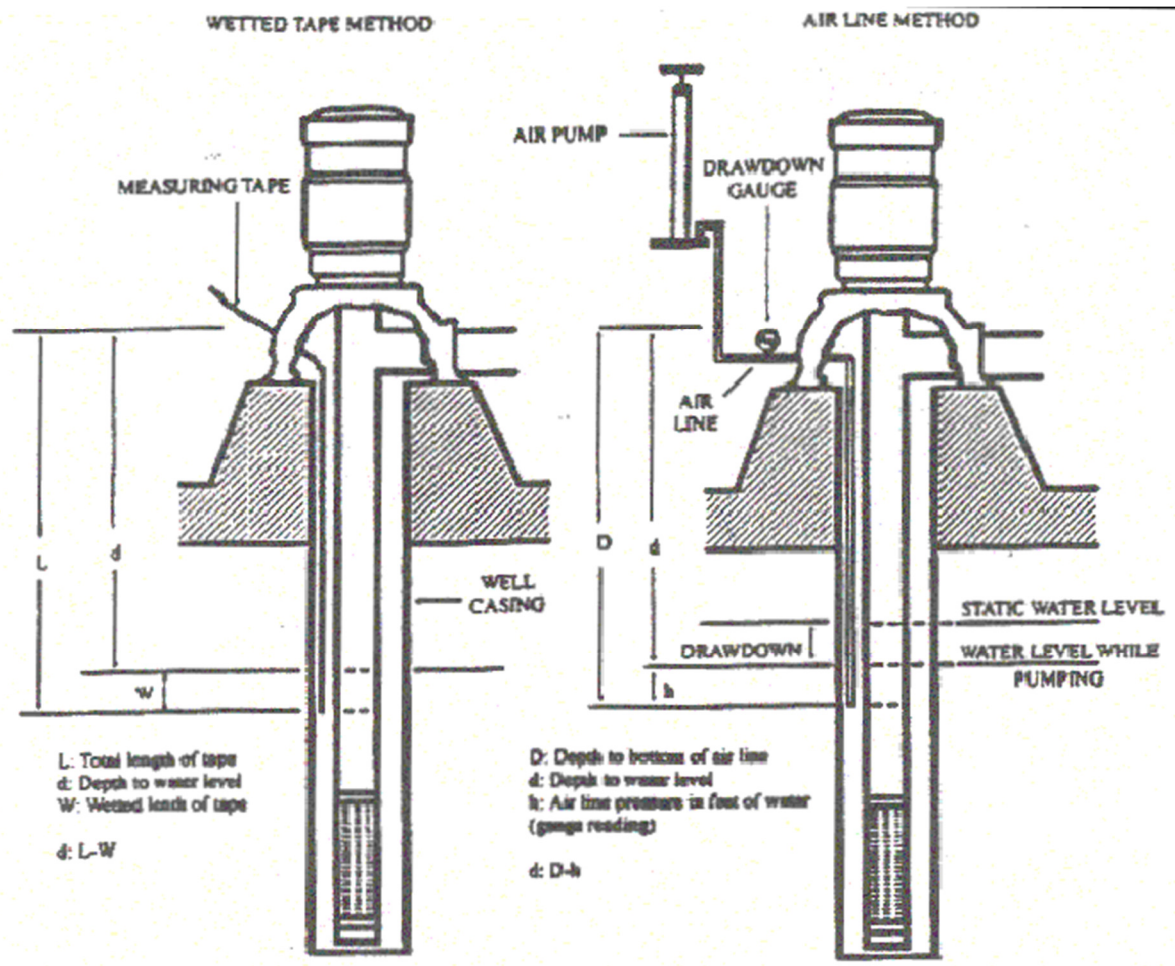
A. Terminology.

It is important to understand the meaning of the terms used relating to the pumping test. Some of these terms are as follows:

1. Static Water Level. This is the level at which water stands in the well when no water is being pumped. It is generally expressed as the distance in feet from the ground surface to the water level in the well.
2. Pumping Level. This is the level at which water stands in the well when pumping is in progress. The pumping level may also be referred to as the dynamic water level.
3. Drawdown. When a well is pumped, the water level in the vicinity of the well will be lowered. Drawdown is the difference, measured in feet, between the static water level and the pumping level.
4. Well Yield. The well yield is the volume of water per unit of time discharged from a well either by pumping or by free flow.
5. Specific Capacity. Specific capacity of the well is its yield per unit of drawdown, usually expressed as gallons per minute (gpm) per foot of drawdown.

B. Determination of Depth to Water Level.

1. Wetted Tape Method. The wetted tape method will accurately measure the depth to water in a well and can be used for depths up to one hundred feet [30.5 meters] or more. Attach a lead weight to the end of a steel measuring tape, if needed. Wipe dry the lower three or four feet [.91 or 1.22 meters] of the tape and coat with carpenter's chalk. Lower the tape into the well through the air vent or other opening until part of the chalked section is below water. Continue to lower the tape until the next even foot mark can be held exactly at a reference point and record the number of feet indicated. The tape is then removed from the well and note is made of the footage of chalked section washed away by the water. Subtract this reading from the reading obtained at the top reference point. The difference in these readings is the depth from the reference point to the water level.
2. Air Line Method. The air line method measures depth to water level by determining the air pressure required to push all of the water out of a submerged tube of known length. The air line consists of a one-fourth inch [6.35 millimeters] pipe, copper or plastic tubing, extending from the top of the well to a point several feet below the lowest anticipated water level. To avoid turbulence near the intake of the pump, the lower end of the air line should be at least five feet [1.52 meters] above or below the point where water enters the pump. The exact length of the air line must be known or should be measured as it is placed in the well. Make all joints airtight with white lead or piping compound. The upper end of the tube is fitted with suitable connections for an air gauge, a tire valve, and an air pump.



Pump the air into the line until the gauge pressure is constant. This indicates that all of the water has been expelled from the tube. The gauge reading shows the pressure necessary to support a column of water of a height equal to the depth the tube was submerged. If the gauge indicates feet of water, then it shows directly the submerged length of the line in feet. Subtracting the submerged length from the total length of the air line gives the depth to static water level. Gauges calibrated in pounds per square inch (psi) may be converted to feet of water by multiplying by 2.31.

C. Determination of Drawdown.

<u>Example:</u>	<u>Depth to water before pumping</u>	\equiv	<u>100 feet</u>
	<u>Depth to water after pumping</u>	\equiv	<u>125 feet</u>

$$\begin{aligned} \text{Drawdown} &\equiv \text{Depth after pumping} - \text{depth before pumping} \\ &\equiv 125 \text{ feet} - 100 \text{ feet} = 25 \text{ feet} \end{aligned}$$

First, determine the static water level. Second, after the well has achieved a constant pumping rate or yield, measure the depth to the water level. The difference of these

readings before and after pumping the well at a specific rate is measured in feet and recorded as feet of drawdown.

D. Determination of Specific Capacity.

Example: Yield of well \equiv 160 gpm Drawdown \equiv 20 feet
 Specific capacity \equiv 160/20 \equiv 8 gpm per foot of drawdown

Specific capacity is calculated by dividing the yield of the well in gallons per minute by the drawdown. Both measurements shall be taken at the same time.

E. Interpretation of Water Well Problems.

With proper records of water well tests, well problems can be interpreted. Some rules to follow are:

1. If the output of the well (gpm) drops, the drawdown decreases, and the specific capacity remains the same, the problem is most likely the pump.
2. If the output of the well (gpm) drops, the static water level remains the same, the drawdown increases and the specific capacity decreases, the well may be plugging. Acid clean the well when the specific capacity drops about twenty-five percent.
3. If the output of the well (gpm) drops and the static water level is declining, the aquifer may be depleting.

V. GENERAL POLICY - GEOTHERMAL ENERGY

Geothermal energy is the renewable thermal energy of the earth or ground water. Using this form of energy for heating and cooling purposes has become increasingly popular for both commercial and residential purposes. Geothermal regulations are administered by the North Dakota Geological Survey, and require a permit from the State Geologist prior to the installation of a geothermal system. All construction of geothermal energy systems must comply with the rules contained in Chapter 43-02-07, Geothermal Energy Production. These regulations cover both vertical-loop and horizontal-loop systems. Installers should contact the North Dakota Geological Survey for more information regarding installation of geothermal energy systems.

Because of the potential for contamination of drinking water systems and aquifers, and the pollution of surface waters, the department provides the following guidance for users of geothermal energy. This policy relates primarily to private individual systems. Commercial and industrial projects should be constructed only after consultation with the department regarding water supply and disposal requirements and the North Dakota Geological Survey regarding construction permitting requirements.

1. The department encourages the conservation of ground water resources, therefore, closed-loop geothermal systems are recommended. Closed-loop systems also have fewer maintenance problems. If an open-loop system is constructed, whenever possible, the water should be reinjected into the supply aquifer or used for other beneficial purposes such as irrigation or stock watering.

2. Users of open-loop geothermal energy systems must be aware of the scale-forming or corrosive nature of some of the highly mineralized water in North Dakota. Some ground water supplies may require treatment prior to use, or serious problems with operation of the heat exchange system can develop. Chemicals used for cleaning the heat exchange system, and the material removed through cleaning, may not be suitable for discharge to the storm sewer system. Problems with the development of scale will often reduce the volume of water that can be disposed into injection wells.
3. All supply and disposal wells shall be constructed to comply with department rules, chapter 33.1-18-01, "Water Well Construction and Water Well Pump Installation." The geothermal system should be constructed to eliminate all sources of contamination to the water supply system and the ground water aquifer.
4. If municipal water supply systems are to be used as a source of geothermal energy, an approved backflow prevention device shall be used to separate the geothermal energy from the public water supply system.
5. To protect the drinking water supply, heat exchangers, unless otherwise permitted under the North Dakota state plumbing code, shall be of double-wall construction with a space between the two walls which is vented to the atmosphere.
6. Geothermal energy systems shall not discharge water to either municipal drinking water or sanitary sewer systems. Discharge to the municipal drinking water system is a cross-connection and could result in chemical and/or microbiological contamination of the system. Nearly all cities in the state have sewer use ordinances specifically prohibiting the connection of clear water discharges to the sewer system.
7. Geothermal energy systems may discharge to municipal storm sewer systems with approval of the municipality, and if the discharge water is compatible with the waters of the receiving stream. Degradation of surface waters by discharges from geothermal energy systems will not be allowed.
8. If water is to be reinjected into the ground water system, the discharge should be made to a similar or inferior quality aquifer.
9. Highly mineralized or saline waters, such as from the Dakota formation, should be returned to those aquifers if secondary use is not possible.
10. Evaporation ponds, which do not discharge, may be used as a means of disposal where other methods of disposal are not feasible.
11. Disposal permits under the Underground Injection Control Program or the National Pollutant Discharge Elimination System Regulations may be required. Users of geothermal energy systems should contact the department to determine whether a permit is required for their installation.

VI. ABANDONMENT OF TEST HOLES, PARTIALLY COMPLETED WELLS, AND COMPLETED WELLS

Reprinted from AWWA Standard for Water Wells, A100-84, by permission. Copyright © 1984, American Water Works Association.

Section 1.1 - General

The recommendations contained in this appendix pertain to wells and test holes in consolidated and unconsolidated formations. Each sealing job should be considered as an individual problem, and methods and materials should be determined only after carefully considering the objectives outlined in the standard.

Section 1.2 - Wells in Unconsolidated Formations

Normally, abandoned wells extending only into consolidated formations near the surface and containing water under water-table conditions can be adequately sealed by filling with concrete, grout, neat cement, clay, or clay and sand. In the event that the water-bearing formation consists of coarse gravel and producing wells are located nearby, care must be taken to select sealing materials that will not affect the producing wells. Concrete may be used if the producing wells can be shut down for a sufficient time to allow the concrete to set. Clean, disinfected sand or gravel may also be used as fill material opposite the water-bearing formation. The remainder of the well, especially the upper portion, should be filled with clay, concrete, grout, or neat cement to exclude surface water. The latter method, using clay as the upper sealing material, is especially applicable to large-diameter abandoned wells.

In gravel-packed, gravel-envelope, or other wells in which coarse material has been added around the inner casing to within twenty to thirty feet [6.1 to 9.1 meters] of the surface, sealing outside the casing is very important. Sometimes this sealing may require removal of the gravel or perforation of the casing.

Section 1.4 - Wells in Noncreviced Rock Formations

Abandoned wells encountering noncreviced sandstone or other water-bearing consolidated formations below the surface deposits may be satisfactorily sealed by filling the entire depth with clay, provided there is no movement of water in the well. Clean sand, disinfected if other producing wells are nearby, may also be used through the sandstone up to a point ten to twenty feet [3.0 to 6.1 meters] below the bottom of the casing. The upper portion of this type of well should be filled with concrete, neat cement, grout, or clay to provide an effective seal against entrance of surface water. If there is an appreciable amount of upward flow, pressure cementing or mudding may be advisable.

Section 1.5 - Multiple Aquifer Wells

Some special problems may develop in sealing wells extending into more than one aquifer. These wells should be filled and sealed in such a way that exchange of water from one aquifer to another is prevented. If no appreciable movement of water is encountered, filling with concrete, neat cement, grout, or alternate layers of these materials and sand will prove satisfactory. When velocities are high, the procedures outlined in section 1.6 are recommended. If alternate concrete plugs or bridges are used, they should be placed in known nonproducing horizons or, if locations of the nonproducing horizons are not known, at frequent intervals. Sometimes when the casing is not grouted or the formation is nocaving, it may be necessary to break, slit, or perforate the casing to fill any annular space on the outside.

Section 1.6 - Wells With Artesian Flow

The sealing of abandoned wells that have a movement of water between aquifers or to the surface requires special attention. Frequently the movements of water may be sufficient to make sealing by gravity placement of concrete, cement grout, neat cement, clay, or sand

impractical. In such flow, if preshaped or precast plugs are used, they should be several times longer than the diameter of the well, to prevent tilting.

Since it is very important in wells of this type to prevent circulation between formations or loss of water to the surface or to the annular space outside the casing, it is recommended that pressure cementing, using the minimum quantity of water that will permit handling, be used. The use of wells, large stone aggregate (not more than one-third of the diameter of the hole), lead wool, steel shavings, a well packer, or a wood or cast-lead plug or bridge will be needed to restrict the flow and thereby permit the gravity placement of sealing material above the formation producing the pressure mudding instead of this process if sometimes permissible.

In wells which the hydrostatic head producing flow to the surface is low, the movement of water may be arrested by extending the well casing to an elevation above the artesian-pressure surface. Previously described sealing methods suitable to the geologic conditions can then be used.

Section 1.7 - Sealing Materials

A number of materials that can be used for sealing wells satisfactorily, including concrete, cement grout, neat cement, clay, sand, or combinations of these materials, are mentioned in this appendix. Each material has certain characteristics and distinctive properties; therefore, one material may be especially suited for doing a particular job. The selection of the material must be based on the construction of the well, the nature of the formations penetrated, the material and equipment available, the location of the well with respect to possible sources of contamination, and the cost of doing the work.

Concrete is generally used for filling the upper part of the well or water-bearing formations, for plugging short sections of casings, or for filling large-diameter wells. Its use is cheaper than neat cement or grout, and it makes a stronger plug or seal. However, concrete will not penetrate seams, crevices, or interstices. Furthermore, if not properly placed, the aggregate is likely to separate from the cement.

Cement grout or neat cement and water are far superior for sealing small openings, for penetrating any annular space outside of casings, and for filling voids in the surrounding formation. When applied under pressure, they are strongly favored for sealing wells under artesian pressure or those encountering more than one aquifer. Neat cement is generally preferred to grout because it does not separate.

Clay, as a heavy mud-laden or special clay fluid applied under pressure, has most of the advantages of cement grout. Its use is preferred by some competent authorities, particularly for sealing artesian wells. Others feel that it may, under some conditions, eventually be carried away into the surrounding formations.

Clay in a relatively dry state, clay and sand, or sand alone may be used advantageously as sealing materials, particularly under water-table conditions where diameters are large, depths are great, formations are caving, and there is no need for achieving penetration of openings in casings, liners, or formations, or for obtaining a watertight seal at any given spot.

Frequently combinations of these materials are necessary. The more expensive materials are used when strength, penetration, or watertightness are needed. The less expensive materials are used for the remainder of the well. Cement grout or neat cement is

now being mixed with bentonite clays and various aggregates. Superior results and lower cost are claimed for such mixtures.

ASTM STANDARD A 53*
Welded and Seamless Steel
Pipe Schedule 40 - Standard Weight

<u>Nominal Size</u> <u>(Inches)</u>	<u>External</u> <u>Diameter</u> <u>(Inches)</u>	<u>Internal</u> <u>Diameter</u> <u>(Inches)</u>	<u>Wall Thickness</u> <u>(Inches)</u>	<u>Weight Per Foot (lb)</u>	
				<u>Plain End</u>	<u>Threads and</u> <u>Couplings</u>
<u>1 1/4</u>	<u>1.660</u>	<u>1.380</u>	<u>0.140</u>	<u>2.27</u>	<u>2.28</u>
<u>1 1/2</u>	<u>1.900</u>	<u>1.610</u>	<u>0.145</u>	<u>2.72</u>	<u>2.73</u>
<u>2</u>	<u>2.375</u>	<u>2.067</u>	<u>0.154</u>	<u>3.65</u>	<u>3.68</u>
<u>2 1/2</u>	<u>2.875</u>	<u>2.469</u>	<u>0.203</u>	<u>5.79</u>	<u>5.82</u>
<u>3</u>	<u>3.500</u>	<u>3.068</u>	<u>0.216</u>	<u>7.58</u>	<u>7.62</u>
<u>3 1/2</u>	<u>4.000</u>	<u>3.568</u>	<u>0.226</u>	<u>9.11</u>	<u>9.20</u>
<u>4</u>	<u>4.500</u>	<u>4.026</u>	<u>0.237</u>	<u>10.79</u>	<u>10.89</u>
<u>5</u>	<u>5.563</u>	<u>5.047</u>	<u>0.258</u>	<u>14.62</u>	<u>14.81</u>
<u>6</u>	<u>6.625</u>	<u>6.065</u>	<u>0.280</u>	<u>18.97</u>	<u>19.18</u>
<u>8</u>	<u>8.625</u>	<u>7.981</u>	<u>0.322</u>	<u>28.55</u>	<u>29.35</u>
<u>10</u>	<u>10.750</u>	<u>10.020</u>	<u>0.365</u>	<u>40.48</u>	<u>41.85</u>
<u>12</u>	<u>12.750</u>	<u>12.000</u>	<u>0.375</u>	<u>49.56</u>	<u>51.15</u>
<u>14</u>	<u>14.000</u>	<u>13.250</u>	<u>0.375</u>	<u>54.57</u>	<u>57.00</u>
<u>16</u>	<u>16.000</u>	<u>15.250</u>	<u>0.375</u>	<u>62.58</u>	<u>65.30</u>
<u>18</u>	<u>18.000</u>	<u>17.250</u>	<u>0.375</u>	<u>70.59</u>	<u>73.00</u>
<u>20</u>	<u>20.000</u>	<u>19.250</u>	<u>0.375</u>	<u>78.60</u>	<u>81.00</u>
<u>22</u>	<u>22.000</u>	<u>21.000</u>	<u>0.500</u>	<u>114.81</u>	
<u>24</u>	<u>24.000</u>	<u>23.000</u>	<u>0.500</u>	<u>125.49</u>	
<u>26</u>	<u>26.000</u>	<u>25.000</u>	<u>0.500</u>	<u>136.17</u>	
<u>28</u>	<u>28.000</u>	<u>27.000</u>	<u>0.500</u>	<u>146.85</u>	
<u>30</u>	<u>30.000</u>	<u>29.000</u>	<u>0.500</u>	<u>157.53</u>	
<u>32</u>	<u>32.000</u>	<u>31.000</u>	<u>0.500</u>	<u>168.21</u>	
<u>34</u>	<u>34.000</u>	<u>33.000</u>	<u>0.500</u>	<u>178.89</u>	
<u>36</u>	<u>36.000</u>	<u>35.000</u>	<u>0.500</u>	<u>189.57</u>	

ASTM STANDARD A 589*

Water-Well Reamed and Drifted Pipe

<u>Nominal Size (Inches)</u>	<u>External Diameter (Inches)</u>	<u>Internal Diameter (Inches)</u>	<u>Wall Thickness (Inches)</u>	<u>Weight Per Foot (lb)</u>	
				<u>Plain End</u>	<u>Threads and Couplings</u>
<u>1 1/4</u>	<u>1.660</u>	<u>1.380</u>	<u>0.140</u>	<u>2.27</u>	<u>2.30</u>
<u>1 1/2</u>	<u>1.900</u>	<u>1.610</u>	<u>0.145</u>	<u>2.72</u>	<u>2.75</u>
<u>2</u>	<u>2.375</u>	<u>2.067</u>	<u>0.154</u>	<u>3.65</u>	<u>3.75</u>
<u>2 1/2</u>	<u>2.875</u>	<u>2.469</u>	<u>0.203</u>	<u>5.79</u>	<u>5.90</u>
<u>3</u>	<u>3.500</u>	<u>3.068</u>	<u>0.216</u>	<u>7.58</u>	<u>7.70</u>
<u>3 1/2</u>	<u>4.000</u>	<u>3.548</u>	<u>0.226</u>	<u>9.11</u>	<u>9.25</u>
<u>4</u>	<u>4.500</u>	<u>4.026</u>	<u>0.237</u>	<u>10.79</u>	<u>11.00</u>
<u>5</u>	<u>5.563</u>	<u>5.047</u>	<u>0.258</u>	<u>14.62</u>	<u>15.00</u>
<u>6</u>	<u>6.625</u>	<u>6.065</u>	<u>0.280</u>	<u>18.97</u>	<u>19.45</u>
<u>8</u>	<u>8.625</u>	<u>7.981</u>	<u>0.322</u>	<u>28.55</u>	<u>29.35</u>
<u>10</u>	<u>10.750</u>	<u>10.020</u>	<u>0.365</u>	<u>40.48</u>	<u>41.85</u>
<u>12</u>	<u>12.750</u>	<u>12.000</u>	<u>0.375</u>	<u>49.56</u>	<u>51.15</u>

*From "1973 Annual Book of ASTM Standards"

SDR RATED PVC CASING - WEIGHTS AND DIMENSIONS

NOMINAL SIZE	STANDARD DIMENSION RATIO (SDR)	AVERAGE INCHES O.D.	MIN. INCHES WELL	WEIGHT (LBS/FT)		MINIMUM I.D.					
				AIR	S.P.C.-1	ROUND	I.D. AT ADDITIONAL % OUT OF ROUND				
							1%	2%	3%	4%	5%
4"	21	4.500	.214	1.875	.555	3.961	3.921	3.882	3.842	3.803	3.763
	17	4.500	.265	2.292	.678	3.882	3.843	3.804	3.765	3.726	3.688
	13.5	4.500	.333	2.831	.838	3.730	3.693	3.655	3.618	3.580	3.544
5"	21	5.563	.265	2.870	.850	4.909	4.860	4.811	4.762	4.713	4.664
	17	5.563	.327	3.497	1.035	4.781	4.743	4.696	4.647	4.598	4.552
	13.5	5.563	.412	4.341	1.285	4.601	4.555	4.509	4.463	4.417	4.371
6"	21	6.625	.318	4.074	1.206	5.856	5.797	5.738	5.680	5.621	5.563
	17	6.625	.390	4.966	1.470	5.705	5.648	5.590	5.534	5.478	5.420
	13.5	6.625	.491	6.144	1.819	5.481	5.426	5.371	5.317	5.262	5.207
8"	21	8.625	.410	6.884	2.038	7.817	7.751	7.684	7.618	7.552	7.486
	17	8.625	.508	8.421	2.493	7.427	7.353	7.278	7.204	7.130	7.056
10"	21	10.750	.511	10.693	3.165	9.516	9.421	9.325	9.230	9.135	9.040
12"	21	12.750	.608	15.042	4.452	11.302	11.189	11.076	10.963	10.849	10.736
18"		16.000	.762	23.748	7.029	14.235	14.093	13.950	13.808	13.666	13.523

Pvc / Vinyl Chloride (PVC) casing for water wells will carry the following labels for compliance with the American Society for Testing and Materials (ASTM) specification F480-81.

8" WELL CASING PVC 1120 SDR 21 IC2 F480 NSF-WC

This label includes the SDR, IC number, and the NSF-WC logo.

8" WELL CASING PVC 1120 200 PSI SDR 21 IC2 F480 NSF-WC D2241 NSF-PW

This label is the same as the first except it has also been tested as ASTM D2241 pressure pipe; therefore, the label includes the NSF-PW logo, as well as the NSF-WC logo.

NOTE: A label will also include the manufacturer's name and production code number, which are not included in the above labels.

STATE OF NORTH DAKOTA BOARD OF WATER WELL CONTRACTORS
300 E Boulevard, Bismarck, North Dakota 58501

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Board of Water Well Contractors within 30 days after completion or abandonment of the well.

1. WELL OWNER: Name _____ Address _____	7. WATER LEVEL: Static water level _____ feet below land surface. If flowing: cross-in pressure _____ psi GPM flow _____ through _____ inch pipe Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Reducer <input type="checkbox"/> Other _____ If over: Specify _____																																																																	
2. WELL LOCATION: Sketch map location must agree with written location. _____ County _____ _____ 1/4 _____ 1/4 _____ 1/4 Sec. _____ Twp. _____ N _____ Rq. _____ W	8. WELL TEST DATA: <input type="checkbox"/> Pump <input type="checkbox"/> Bailor <input type="checkbox"/> Other _____ Pumping level below land surface: _____ ft. after _____ hrs pumping _____ gpm _____ ft. after _____ hrs pumping _____ gpm _____ ft. after _____ hrs pumping _____ gpm																																																																	
3. PROPOSED USE: <input type="checkbox"/> Domestic <input type="checkbox"/> Geothermal <input type="checkbox"/> Monitoring <input type="checkbox"/> Stock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole	9. WELL LOG: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Formation</th> <th colspan="2" style="text-align: center;">Depth (ft.)</th> </tr> <tr> <th style="text-align: center;">From</th> <th style="text-align: center;">To</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> <p style="text-align: center; margin-top: 5px;">(Use separate sheet, if neces.)</p>	Formation	Depth (ft.)		From	To																																																												
Formation	Depth (ft.)																																																																	
	From	To																																																																
6. WELL CONSTRUCTION: Diameter of hole _____ inches. Depth _____ feet. Casing: <input type="checkbox"/> Steel <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Threaded <input type="checkbox"/> Welded <input type="checkbox"/> Other _____ If other, specify _____ Pipe Weight: Diameter: From: To: feet _____ b/w. _____ inches _____ feet _____ feet _____ b/w. _____ inches _____ feet _____ feet _____ b/w. _____ inches _____ feet _____ feet Was perforated pipe used? <input type="checkbox"/> Yes <input type="checkbox"/> No Perforated pipe set from _____ feet to _____ feet Was casing left open end? <input type="checkbox"/> Yes <input type="checkbox"/> No Was a well screened installed? <input type="checkbox"/> Yes <input type="checkbox"/> No Material _____ Diameter _____ inches (stainless steel, bronze, etc.) Slot size _____ set from _____ feet to _____ feet Slot size _____ set from _____ feet to _____ feet Was a packer or seal used? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, what material _____ Depth _____ feet Type of Well: Straight screen <input type="checkbox"/> Gravel packed <input type="checkbox"/> Depth Grouted: From _____ To _____ Grouting Material: Cement _____ Other _____ If other, specify: _____ Wellhead completion: Pressure Unit _____ 12' above grade _____ Other _____ If other, specify: _____ Was pump installed? <input type="checkbox"/> Yes <input type="checkbox"/> No Was well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No	10. DATE COMPLETED: _____ 11. WAS WELL PLUGGED OR ABANDONED? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, how? _____ 12. REMARKS: 13. DRILLER'S CERTIFICATION: This well was drilled under my jurisdiction and this report is true to the best of my knowledge. Driller's or Firm's Name _____ Certificate No. _____ Address _____ Signed By _____ Date _____																																																																	

CHAPTER 33.1-18-02
GROUND WATER MONITORING WELL CONSTRUCTION REQUIREMENTS

Section

<u>33.1-18-02-01</u>	<u>Purpose</u>
<u>33.1-18-02-02</u>	<u>Applicability</u>
<u>33.1-18-02-03</u>	<u>Exclusions</u>
<u>33.1-18-02-04</u>	<u>Definitions</u>
<u>33.1-18-02-05</u>	<u>Borehole and Well Locations</u>
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<u>33.1-18-02-08</u>	<u>Monitoring Well Construction Materials</u>
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<u>33.1-18-02-10</u>	<u>Borehole and Monitoring Well Abandonment</u>

33.1-18-02-01. Purpose.

The purpose of this chapter is to establish minimum acceptable standards for the design, installation, construction, decommissioning, and documentation of boreholes and ground water monitoring wells.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-02. Applicability.

The installation, construction, and decommissioning of boreholes and ground water monitoring wells must be supervised onsite by a certified and licensed contractor.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-18.2, 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-03. Exclusions.

1. Injection wells for the oil and gas industry;
2. Boreholes, piezometers, and monitoring wells for dams;
3. Monitoring well or borehole construction used for mineral exploration addressed under existing federal or state law;
4. Boreholes advanced above an aquifer for the purpose of determining the local stratigraphy; and
5. Special cases, with prior approval of the department.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-04. Definitions.

The terms used in this chapter have the same meaning as in North Dakota Century Code chapter 43-35, except that:

1. "Annular-space: annulus" means the space between a casing and a riser or between the riser and the borehole.
2. "Aquifer" means a water-bearing formation that transmits water in sufficient quantities to supply a well for a beneficial use.
3. "Borehole" means an open or cased subsurface hole created by drilling.
4. "Casing" means the pipe installed to maintain the integrity of the borehole. The term casing is used in this chapter only in reference to protective casing; the definition is included to distinguish the term from riser.
5. "Department" means the department of environmental quality.
6. "Monitoring well" means any cased excavation or opening into the ground made by digging, boring, drilling, driving, jetting, or other methods for the purpose of determining the physical, chemical, biological, or radiological properties of groundwater.
7. "Riser" means the pipe extending from the well screen to or above the ground surface.
8. "Shall" or "must" means mandatory compliance with all aspects of the specific provision of this chapter within which the word appears.
9. "Should" means the specific provision in which the word appears is not mandatory but is a recommended desirable procedure or method. Deviation from the provision is subject to site specific consideration by the certified contractor installing the borehole or monitoring well.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-05. Borehole and well locations.

1. Prior to the initiation of assessment activities in response to a contaminant release or when prior departmental approval is required, under existing state statute boreholes and monitoring wells must be installed at practicable locations based on plans and specifications approved by the department.
2. The riser of a monitoring well must terminate at least one foot [0.304 meter] above the ground surface, except:
 - a. Monitoring wells should not be located in drainage ditches, floodplains, or floodway. Where this is impractical, the monitoring well should terminate at least two feet [0.609 meter] above the one hundred year flood elevation for the well site. Those risers that do not must be constructed to preclude flood impact to the monitoring well.

- b. A riser for a well constructed in a high traffic area or other limiting site conditions should be mounted flush to grade or below grade with a protective casing to minimize damage, provided that construction must include a watertight seal to preclude surface water from entering the protective casing or riser and that the well is clearly marked as a monitoring well.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-06. Drilling methods.

1. This subsection applies to areas not likely having subsurface contamination.

- a. Whenever feasible, drilling methods should not introduce water or fluids into the borehole and should optimize cuttings control at ground surface. The selected drilling method must reflect the purpose or objective of the borehole or monitoring well.
- b. During drilling of boreholes, adequate care must be taken to prevent commingling of water from separate aquifers.
- c. The nominal diameter of a borehole must provide a minimum annular space of 1.9 inches [48 millimeters].

2. This subsection applies to areas having potential subsurface contamination. In addition to the requirements of subsection 1, drilling methods in areas of potential subsurface contamination must follow the procedures in this subsection.

- a. During drilling of boreholes, precautions must be taken to prevent cross-contamination of boreholes.

(1) Augers, center plug, and soil sampling equipment must be decontaminated following procedures appropriate for the contaminants of concern, which do not result in the cross-contaminatin of boreholes or monitoring wells and which do not conflict with the monitoring objective.

(2) The drilling sequence of boreholes must consider the objective of the site assessment, including factors such as the suspected location of the contaminant, contaminant characteristics, and local site geology.

- b. All potentially contaminated cuttings, as well as development and purge water, must be handled in an environmentally safe manner. When suspected contamination includes hazardous substances as defined and regulated under North Dakota Administrative Code chapter 33.1-24-02, proper management methods for cuttings and water of each borehole must meet the requirements of North Dakota Century Code chapter 23.1-04 and North Dakota Administrative Code article 33.1-24.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-07. Borehole and monitoring well documentation.

1. A written log must be kept which records the depth below ground surface of the boundaries of all strata encountered when drilling a borehole. Each stratum encountered must be described using generally accepted geologic terminology.
2. The certified monitoring well contractor must provide a monitoring well completion report to the board of water well contractors on forms available from or acceptable to the board within thirty days after the well has been installed. A completed report must include project and location, date of drilling, logger's name and title, well number or borehole number, drilling method and fluids used, borehole diameter, total depth, decontamination procedures, and a lithologic description as provided by subsection 1. Additional information, the availability of which is dependent upon the drilling method used, should also be provided and includes moisture content, fractures, and depth at which water was first encountered. A completed report must also include certified monitoring well contractor's name and license number; riser material; screen material and screen slot size, length, placement; filter pack materials; riser and screen cleaning and installation procedures; sealing materials, placement and installation procedures; well development procedures; and any installation conditions which affected well construction.
3. When completion reports are required by the department as a matter of fulfillment of its regulatory functions, the reports must include the information required by subsections 1 and 2; a detailed drawing of each well, including dimensions, as part of the well driller's report; and a map drawn to a specified scale showing the locations of all monitoring wells with an accuracy of three feet [0.914 meter]. The map must include manmade structure boundaries, any pertinent property boundaries, a north arrow, the location coordinates and elevation of all permanent benchmarks, the horizontal position of each monitoring well and its survey coordinates, the vertical elevation of the top riser referenced to the nearest benchmark to an accuracy of 0.01 feet [0.003 meter], and the respective identification number for each well.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-08. Monitoring well construction materials.

1. Riser.
 - a. Specifications. The riser for a monitoring well must retain structural integrity for the duration of the monitoring period under actual subsurface conditions.
 - (1) The riser and couplings must be constructed of materials that neither absorb nor leach chemical constituents that could bias representative ground water samples. The riser and couplings must be compatible, resisting corrosion, with anticipated contaminants. Depending upon the intended use of the well, the riser should have a vented cap, except wells constructed in a potential flooding condition or flush-mounted wells must not have a vented cap.
 - (2) The riser must be capable of withstanding installation and development stresses without damage.

b. Assembly and installation.

- (1) The interior and exterior surfaces of the riser and couplings must be thoroughly cleaned in a manner that does not conflict with the monitoring objective prior to assembly and installation.
- (2) The individual sections of the riser must be joined in a manner that neither absorbs nor leaches chemical constituents that could bias representative ground water samples.
- (3) The riser must be centered, as practicable, in the borehole.

2. Screen. A ground water monitoring well must be constructed with a screen.

a. Specifications.

- (1) A screen and bottom plug must be constructed of material that is nonreactive with constituents in soil and ground water at the monitoring location.
- (2) The screen must be capable of withstanding installation and well development stresses without damage.
- (3) The screen must be new, machine slotted or continuous wrapped wire-wound. The screen slots must not be hand-cut or wrapped with filter fabric, unless approved prior to installation by the department.
- (4) The screen slot size must retain and prevent at least fifty percent of the grain size of the collapsed formation or ninety percent of the filter pack from entering the screen.
- (5) The screen placement and length must allow for entry of ground water from a predetermined zone appropriate for the collection of representative ground water samples and future fluctuations of the water table.

b. Assembly and installation.

- (1) The screen and bottom plug must be thoroughly cleaned, in a manner which does not conflict with the monitoring objective, prior to assembly and prior to insertion into the borehole.
- (2) The screen must be permanently joined to the well riser in a manner that neither absorbs nor leaches chemical constituents that could bias representative ground water samples.
- (3) The screen must be centered, as practicable, in the borehole.

3. Filter packs.

- a. Specifications. When filter packs are used, they must be compatible with the purpose or objective of the monitoring well and have a specific gravity of two and one-half or greater. The filter pack grain size must minimize formation materials from entering the screen. Collapsed formation may be used as filter pack material if it limits passage of at least fifty percent of the formation to the screen.

b. Installation. The filter pack should extend upward from the bottom of the screen to at least two feet [0.609 meter] above the top of the screen. Where shallow water tables occur, the required height of filter pack above the top of the screen may be reduced a maximum of one foot [0.304 meter] to allow space for the annulus sealant. In special cases where the potential for a cross-connection or commingling of different water-bearing zones is documented by the monitoring well contractor requiring less than a one-foot [0.304-meter] filter pack above the screen intake, a reduction in the filter pack to less than one foot [0.304 meter] above the top of the screen to meet site specific conditions is allowed.

4. Filter pack seal. A ground water monitoring well must be installed with a filter pack seal.

a. Specifications. The filter pack seal should extend at least two feet [0.609 meter] upward from the top of the filter pack. Where shallow water tables occur, the filter pack seal may be reduced a maximum of one foot [0.304 meter] to allow for annular space sealant. Sodium bentonite chips of size three-eighths-inch [0.95-centimeter] diameter or smaller should be placed in a manner which avoids bridging of the chips. Sodium bentonite chips or pellets must be used for seals placed below the water table, except in circumstances where the sodium bentonite may bias representative ground water samples.

b. Installation. Sodium bentonite pellets, chips, or granules used as filter pack seal above a water table must be hydrated after placement.

5. Annulus seal. A ground water monitoring well must be installed with an annulus seal.

a. Specifications.

(1) The annulus seal should extend from the top of the filter pack seal upward to the ground surface seal, and it should be at least two feet [0.609 meter] in length.

(2) Grout material:

(a) Should have an equal or lower permeability than the least permeable geologic formation penetrated by the borehole.

(b) Should be compatible with formation material, well casing and riser and not capable of contaminating ground water.

(c) Should be in a form which can be positively and accurately placed to fill all voids.

(d) Should be self-leveling in the annulus and uniform in setup.

(e) Should, when setup, assist the structural stability of the riser.

(f) Should be capable of bonding to the riser and borehole wall to provide a watertight seal.

(3) Acceptable grouts above the water table include neat cement, bentonite chips, high solids bentonite grout, or a cement and bentonite clay mixture

not exceeding five pounds [2.27 kilograms] of bentonite clay per ninety-four-pound [42.6-kilograms] sack of cement.

(4) Bentonite chips or pellets may be used as a seal material in the annulus of shallow monitoring wells provided it is hydrated after each bag is poured into the annulus.

b. Installation. The annulus seal must be placed in a manner so as to ensure the proper placement and distribution of the sealant material.

6. Ground surface seal and protective casing.

a. A protective casing and locking cap is required when the monitoring well is located in an area where the well needs physical protection or is likely to be tampered with.

(1) The protective casing should consist of a metal or polyvinyl chloride assembly at least two inches [5.08 centimeters] larger in diameter than the riser and have a locking cap.

(2) The protective casing should extend from the bottom of the ground surface seal, and it should extend above the top of the riser at least one inch [2.54 centimeters] but not more than four inches [10.15 centimeters].

(3) The locking cap should be secured and locked at all times when the monitoring well is not in use.

b. The ground surface seal should consist of concrete or neat cement. If a protective casing is used, the surface seal should be placed around the protective casing and may not be placed between the protective casing and the riser. The ground surface seal should be sloped to promote drainage away from the riser or protective casing.

c. Dry bentonite pellets or chips should be placed in the annular space between the protective casing and the riser up to the level corresponding with the top of the ground surface seal.

d. A weep hole or vent should be used in the protective casing, provided it is placed at least six inches [15.2 centimeters] above the surface of the ground surface seal, but in no case should it be above a vent hole in the riser.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-09. Monitoring well development.

All monitoring wells must be developed as follows:

1. The waiting period for monitoring well development after completion of well installation shall allow setup of sealants.

2. The monitoring well must be developed utilizing procedures that are compatible with the monitoring objective and that do not adversely impact well integrity. Development

of the monitoring well must include at least three cycles or last for approximately one hour until the water is free of sediments or stabilizes, whichever occurs first. Stabilization occurs when successive measurements of indicator parameters, such as instrument readings for turbidity or specific conductivity, taken from separate well volumes, are within ten percent.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

33.1-18-02-10. Borehole and monitoring well abandonment.

1. The department may require by written notification an owner of the site of a borehole or monitoring well to decommission the borehole or monitoring well when necessary to:
 - a. Eliminate physical hazards on the surface;
 - b. Prevent contamination of ground water;
 - c. Prevent intermingling of desirable and undesirable waters; or
 - d. Eliminate unintended use.
2. Any monitoring well which is constructed and installed after March 1, 1997, and which does not meet the requirements of this chapter must be decommissioned within thirty days after written notification by the department.
3. A borehole must be decommissioned within three working days of discontinuance of use according to subsection 5.
4. A monitoring well must be decommissioned in accordance with the requirements of subsection 5 within one year of discontinuance of use unless it may be reasonably anticipated that the well will be reused in the future. If the well is anticipated to be used in the future, the owner of the well is responsible to periodically inspect and maintain the well to ensure that the well remains in compliance with the standards established in this chapter.
5. Decommissioned and plugged boreholes and monitoring wells must have equal or less permeability than the local environment resulting in no greater influence on the local environment than the original geologic formation. Factors, such as topography, hydrogeology, borehole or well construction, and contaminants, must be considered in a decommissioning operation.
 - a. Immediately prior to decommissioning a monitoring well, the water in the well must be disinfected, except water containing hydrocarbons should not be disinfected with a chlorine disinfectant or other reactive compounds.
 - b. Sealant materials cannot be native soil materials. An acceptable sealant for dry boreholes is concrete. Acceptable sealant materials for wet boreholes and monitoring wells include neat cement, bentonite grout, bentonite pellets, and bentonite chips. Sealant materials must:
 - (1) Be durable;

- (2) Not adversely impact local geologic materials or ground water;
- (3) Form a bond and seal with the sidewall; and
- (4) Resist cracking or shrinkage.
- c. Any settling of the sealant material must be topped off. Sealant material may be terminated two and one-half feet [0.761 meter] below the ground surface in agricultural areas, in which case a native soil plug must be placed on top of the sealant material.
- d. When monitoring well construction and installation documentation is not available, the well has been damaged down hole or the well is located in a proposed future solid waste treatment or disposal area, all protective casing, riser, screen, seals, and filter pack must be removed by pulling or over drilling.
- e. Monitoring wells known by available documentation to be constructed with an impermeable annular space seal may be decommissioned without removing the riser, screen, annular sealant, and filter pack provided:
 - (1) The remaining screen and riser are filled with sealant material;
 - (2) The ground surface seal and protective casing are removed; and
 - (3) The riser must be cut off at a depth to preclude interference with site specific activities, but should be no less than two and one-half feet [0.761 meter] below the surface.

History: Effective _____, 2018.

General Authority: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 43-35-19.2; S.L. 2017, ch. 199, § 47

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-19 is created as follows, subject to the contingency in S.L. 2017, ch. 199, § 75:

ARTICLE 33.1-19
CERTIFICATION OF WATER AND WASTEWATER SYSTEMS OPERATORS

CHAPTER

33.1-19-01 CERTIFICATION OF WATER TREATMENT FACILITY OPERATORS, WATER DISTRIBUTION AND STORAGE SYSTEM OPERATORS, WASTEWATER TREATMENT FACILITY OPERATORS, AND WASTEWATER COLLECTION AND TRANSFER SYSTEM OPERATORS

CHAPTER 33.1-19-01
CERTIFICATION OF WATER TREATMENT FACILITY OPERATORS,
WATER DISTRIBUTION AND STORAGE SYSTEM OPERATORS,
WASTEWATER TREATMENT FACILITY OPERATORS, AND
WASTEWATER COLLECTION AND TRANSFER SYSTEM OPERATORS

Section

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33.1-19-01-16 Substitutions or Equivalents

33.1-19-01-01. Responsibility.

It is the responsibility of any person or persons operating a water treatment, water distribution and storage, wastewater treatment, or wastewater collection and transfer facility or system to comply with this chapter pursuant to North Dakota Century Code chapter 23.1-07.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-02. Definitions.

As used in this chapter, unless the context or subject matter otherwise requires:

1. "Direct responsible charge" means full and active performance of onsite operation of a water or wastewater treatment facility or a water distribution and storage or wastewater collection and transfer system, where the operator is responsible for technical support of the facility or system and provides direction to other operators, is onsite or on call during shift operations, is responsible for the operation of a major segment of a facility or system, or is the sole person employed as the facility or system operator.
2. "Official census" means the census taken each decade or a special census taken by the United States bureau of census.
3. "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state or political subdivision or agency thereof and any legal successor, representative agent, or agency of the foregoing.
4. "Water treatment facility" includes the source or sources of water or the water treatment plant or both.
5. "Water distribution and storage system" means that portion of the water supply system which obtains, stores, and conveys water from the treatment facility or other supply point to the premises of the consumer.
6. "Wastewater treatment facility" means those systems using mechanical or nonmechanical or both types of process units for the treatment of wastewater and for the treatment and disposal of solids removed from such wastes.
7. "Wastewater collection and transfer system" means that portion of a wastewater system in which wastewater is conveyed to a treatment facility from the premises of a contributor.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-03. General.

1. The official census must be used to determine the population served by a water treatment facility, water distribution and storage system, wastewater treatment facility, or wastewater collection and transfer system if population equivalent data is not available.
2. The total number of people served on an annual average daily basis must be used to determine population served by a water treatment facility, water distribution and storage system, wastewater treatment facility, or wastewater collection and transfer system if official census data is not available.
3. Facilities or systems with sufficiently complicated processes may be raised to a classification higher than that indicated by population equivalent or census.
4. Any facility which may have a combination of treatment processes, some of which may be in different facility classes, must be classified based on the treatment process which requires the highest numerical classification.
5. An operator who has direct responsible charge shall hold a certificate that is at least equal to the classification of the facility or system where the operator is employed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-04, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-04. Application for certification.

Applications for certification must be filed with the department fifteen days prior to the examination on appropriate forms. An application remains valid for a period of six months from the date of submission.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-04, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-05. Examinations.

1. Written examinations must be used in determining knowledge, ability, and judgment of the applicant. Oral examinations may be used in lieu of or in conjunction with the written examinations at the discretion of the department.
2. Examinations must be held at places and times set by the department. At least one examination session must be held annually. Additional examination sessions may be held at the discretion of the department.
3. Separate examinations will be prepared for each facility or system classification.
4. All examinations must be graded by personnel designated by the department.
5. An examination may be rewritten once within one year from the date on which the original examination was written. A new certification application and the required fee must be submitted to the department to rewrite an examination.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-06. Fees for certification.

1. Fees for certification are ten dollars per examination.
2. Fees for annual renewals are five dollars per certificate.
3. The certification fee from a qualified applicant is nonrefundable and must be received by the department prior to the examination. Applicants will be notified of the results of the examinations. Papers and test material remain the property of the department. Applicants may, upon request, review the results with the department.
4. Fees received from operators whose application for certification has been rejected will be returned.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-05, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-07. Issuance of certificates.

1. Upon satisfactory compliance with the certification qualifications, fee, and examination requirements provided herein, the department will issue a certificate to the applicant. The

certificate will indicate the operator certification grade, the class of facility or system the applicant is certified to operate, the certificate number, and date of issuance.

2. To maintain certification, all certified operators are required to earn continuing education credits by attending training programs, seminars, workshops, and schools established or officially recognized by the department.

a. The number of continuing education credits that can be earned by attending officially recognized training programs, seminars, workshops, and schools must be established and regulated by the department.

b. The number of continuing education credits to be earned within a three-year period of time is twelve.

c. Training programs offered by other government agencies, educational institutions, and operator organizations may be used for the continuing education credit requirements at the discretion of the department.

d. Certified operators who no longer operate facilities or systems within the boundaries of the state are exempt from the continuing education credit requirements. They may maintain valid North Dakota operator's certificates by paying the required annual renewal fees. If they return to work as an operator in the state, the continuing education credit requirements are in effect and they must earn the required number of training credits during their first year upon returning to North Dakota.

e. A certified operator not in compliance with the continuing education credit requirements, as determined by the department, is subject to revocation or suspension of the operator's certification.

3. Certificates are valid for a maximum of one year and expire on the first day of July. Certificates which have been revoked for a cause, invalidated, or replaced by one of higher grade are not renewable, except as noted in this chapter. Annual certificate renewal cards must be issued by the department upon receipt of the renewal fee as previously set forth.

4. An operator whose certification is invalidated because of failure to renew may apply for renewal within one year following the certificate's expiration date. The operator may be issued a certificate of the same category, grade, and classification if the request for renewal is received by the department within one year after the expiration date of the certificate, the continuing education requirements are satisfied, and all delinquent fees are paid. Failure to renew certification for a period of more than one year following expiration of the certificate will require requalification by reapplication, reexamination, and payment of examination fees before recertification is granted.

5. Certificates remain valid as long as the operator exercises reasonable care and judgment in the application of duties and satisfies the continuing education and annual renewal requirements as previously set forth. Certificates may be revoked as provided in North Dakota Century Code chapter 23.1-07. No certificate will be valid if obtained through fraud, deceit, misrepresentation, or the submission of false or inaccurate data, information, or qualifications.

6. The department may issue certificates by reciprocity, without written examination, to any person holding a certificate from any other state, territory, possession of the United States of America, or any country providing that the requirements for certification of operators under which the operator's certificate was issued are equal to or higher than specified under this chapter for a like certificate and providing further that reciprocal privileges are granted to certified operators in North Dakota.

7. Certificates in an appropriate category, grade, and classification may be issued without examination to qualifying operators as provided by North Dakota Century Code chapter 23.1-07.
8. A temporary restricted operator's permit may be issued by the department upon application by the facility or system owner on behalf of the operator where circumstances may exist to warrant issuance. A temporary restricted operator's permit will be valid for one year from the date of issuance. When the operator satisfies the minimum grade level qualifications and requirements for certification, the operator shall submit an application for certification to the department and write the appropriate category and class examination during the first examination session offered by the department following the date of application.
9. The department may revoke or suspend the certificate of an operator issued hereunder if it is found by the department that the operator has practiced fraud or deception by willfully changing records or by omission, or knowingly giving false information to the department, or failed to take corrective action required by the department, or failed to take required samples, or failed to protect the public health or the state's water resources; or when it is found that reasonable care, judgment, or the application of the operator's knowledge or ability was not used in the performance of the operator's duties. A certificate may not be revoked or suspended except after a hearing before the department. If a certificate is suspended or revoked as herein provided, a new application for certification may be considered by the department if, when, and after the conditions upon which suspension or revocation was based have been corrected and evidence of this fact has been satisfactorily submitted to the department. A new certificate may then be granted by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-04, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-08. Water treatment facility classifications.

Water treatment facilities must be classified in one of five classes. Classifications must be based on population served, design population, type of treatment, raw water quality and volume of water to be treated, and complexity of sludge handling units. Facilities may be classified one level higher than indicated solely by population at the discretion of the department if the facility has special design features or complex features or characteristics unusually difficult to operate, by reason of raw water unusually difficult to treat, by reason of volume of water treated, or by reason of a combination of such conditions or circumstances.

1. **Class IA.** All water facilities using simple chemical or physical treatment processes and designed to serve a population of less than five hundred persons.
2. **Class I.** All water facilities using chemical treatment processes and designed to serve a population of five hundred to five thousand persons. This will include water facilities utilizing disinfection, fluoridation, corrosion control, sequestering, or combinations of these processes or other processes that involve simple chemical addition and a minor degree of operational control.
3. **Class II.**
 - a. All water facilities using chemical treatment processes and designed to serve a population of five thousand to fifteen thousand persons. This will include water facilities utilizing disinfection, fluoridation, corrosion control, sequestering, or combinations of these processes or other processes that involve simple chemical addition and a moderate degree of operational control.

- b. All water plants using chemical softening processes and filtration requiring a moderate degree of operational control serving a population of less than one thousand persons.
- c. All water plants using coagulation, sedimentation, and filtration for clarification requiring a moderate degree of operational control serving a population of less than one thousand five hundred persons.
- d. All water plants using chemical oxidation of iron or manganese and filtration requiring a moderate degree of operational control serving a population of less than two thousand persons.
- e. All water plants using processes requiring a moderate degree of operational control but not listed in subdivisions b, c, and d and serving a population of less than two thousand persons.

4. Class III.

- a. All water facilities using chemical treatment processes and designed to serve a population of fifteen thousand persons or more. This will include water facilities utilizing disinfection, fluoridation, corrosion control, sequestering, or combinations of these processes or other processes that involve simple chemical addition and a high degree of operational control.
- b. All water plants using chemical softening processes and filtration requiring a high degree of operational control serving a population of one thousand to five thousand persons.
- c. All water plants using coagulation, sedimentation, and filtration for clarification requiring a high degree of operational control serving a population of one thousand five hundred to ten thousand persons.
- d. All water plants using chemical oxidation of iron or manganese and filtration requiring a high degree of operational control serving a population of two thousand to fifteen thousand persons.
- e. All water plants using processes requiring a high degree of operational control but not listed in subdivisions b, c, and d and serving a population of two thousand to fifteen thousand persons.

5. Class IV.

- a. All water plants using chemical softening processes and filtration requiring a high degree of operational control serving a population of five thousand or more persons.
- b. All water plants using coagulation, sedimentation, and filtration for clarification requiring a high degree of operational control serving a population of ten thousand or more persons.
- c. All water plants using chemical oxidation of iron or manganese and filtration requiring a high degree of operational control serving a population of fifteen thousand or more persons.
- d. All water plants using processes requiring a high degree of operational control but not listed in subdivisions a, b, and c and serving a population of fifteen thousand or more persons.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-08.1. Water distribution and storage system classifications.

Water distribution and storage systems must be classified in one of five classes. Classifications must be based on population served, design population, type of distribution and storage system, and the volume of water to be handled. Systems may be classified one level higher than indicated solely by population at the discretion of the department by reason of the incorporation in the system of special design features or complex features or characteristics unusually difficult to operate, by reason of conditions of volume and flow, or by reason of a combination of such conditions and circumstances.

1. **Class IA.** All water distribution and storage systems serving a population of less than five hundred persons.
2. **Class I.** All water distribution and storage systems serving a population of five hundred to one thousand five hundred persons.
3. **Class II.** All water distribution and storage systems serving a population of one thousand five hundred to fifteen thousand persons.
4. **Class III.** All water distribution and storage systems serving a population of fifteen thousand to fifty thousand persons.
5. **Class IV.** All water distribution and storage systems serving a population of fifty thousand persons or more.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-09. Wastewater treatment facility classifications.

Wastewater treatment facilities must be classified in one of five classes. Classifications must be based on population served, design population, type of treatment, character and volume of wastes to be treated, and the use and nature of the water resources receiving the facility effluent. Facilities may be classified one level higher than indicated solely by population at the discretion of the department if the facility has special design features or complex features or characteristics unusually difficult to operate, by reason of a waste unusually difficult to treat, by reason of conditions of flow, or by reason of the receiving water quality classification requiring an unusually high degree of facility operational control, or by reason of a combination of such conditions or circumstances.

1. **Class IA.** All wastewater stabilization ponds, land treatment facilities, wetlands treatment facilities, or other nonmechanical facilities requiring a minor degree of operational control serving a population equivalent of less than five hundred persons.
2. **Class I.** All wastewater stabilization ponds, land treatment facilities, wetlands treatment facilities, or other nonmechanical facilities requiring a minor degree of operational control serving a population equivalent of five hundred to less than ten thousand persons.
3. **Class II.**
 - a. All mechanical facilities, mechanically aerated stabilization ponds, oxidation ditches, or other facilities requiring a moderate degree of operational control serving a population equivalent of less than ten thousand persons.
 - b. All wastewater stabilization ponds, land treatment facilities, wetlands treatment facilities, or other nonmechanical facilities requiring a minor degree of operational control serving a population equivalent of ten thousand persons or more.

4. Class III.

a. All mechanical facilities, mechanically aerated stabilization ponds, oxidation ditches, or other facilities requiring a moderate degree of operational and laboratory control serving a population equivalent of ten thousand persons or more.

b. All activated sludge facilities, trickling filter facilities, rotating biological contactor facilities, separate sludge stabilization facilities, or other mechanical facilities requiring a high degree of operational and laboratory control serving a population equivalent of less than ten thousand persons.

5. **Class IV.** All activated sludge facilities, trickling filter facilities, rotating biological contactor facilities, separate sludge stabilization facilities, or other mechanical facilities requiring a high degree of operational and laboratory control serving a population equivalent of ten thousand persons or more.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-09.1. Wastewater collection and transfer system classifications.

Wastewater collection and transfer systems must be classified in one of five classes. Classifications must be based on population served, design population, type of collection and transfer system, and the character and volume of wastes to be handled. Systems may be classified one level higher than indicated solely by population at the discretion of the department by reason of the incorporation in the system of special design features or complex features or characteristics unusually difficult to operate, by reason of conditions of flow, or by reason of a combination of such conditions and circumstances.

1. **Class IA.** All wastewater collection and transfer systems serving a population of less than five hundred persons.

2. **Class I.** All wastewater collection and transfer systems serving a population of five hundred to one thousand five hundred persons.

3. **Class II.** All wastewater collection and transfer systems serving a population of one thousand five hundred to fifteen thousand persons.

4. **Class III.** All wastewater collection and transfer systems serving a population of fifteen thousand to fifty thousand persons.

5. **Class IV.** All wastewater collection and transfer systems serving a population of fifty thousand persons or more.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-10. Change of classification.

Classification of any treatment facility or distribution and storage or collection and transfer system may be changed at the discretion of the department by reason of changes in any condition or circumstance on which the original classification was based. The department shall provide notice of any classification change to the owner of the facility or system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-11. Certification requirements.

1. Operator certification is mandatory for all persons in direct responsible charge of the operation or maintenance of water treatment facilities, water distribution and storage systems, wastewater treatment facilities, or wastewater collection and transfer systems as required by North Dakota Century Code section 23.1-07-07 and applicable federal laws and regulations.
2. Five grades of operators for water treatment facilities, water distribution and storage systems, wastewater treatment facilities, and wastewater collection and transfer systems are hereby established. To qualify for certification in a given grade, an applicant must satisfy the education and experience requirements, or their equivalents, of the grade for which the certification application is submitted.
3. All applicants must pass a certification examination as developed and administered by the department for the class of facility or system for which the certification application is submitted.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-04, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-12. Operator qualifications.

The following grade qualifications are intended to be as nearly compatible as possible to the corresponding facility or system classification.

1. Grade IA.

- a. Completion of high school or equivalent, and a minimum of six months of acceptable operation of a facility or system of class IA or higher.
- b. A combination of education qualifications and experience that will be satisfactory to the department. No substitute may be permitted for minimum experience requirements, unless an exception is granted under section 33.1-19-01-07.

2. Grade I.

- a. Completion of high school or equivalent, and a minimum one year of acceptable operation of a facility or system class I or higher; or
- b. A combination of education qualifications and experience that will be satisfactory to the department. No substitute may be permitted for minimum experience requirements, unless an exception is granted under section 33.1-19-01-07.

3. Grade II.

- a. A four-year college degree and a minimum one year of acceptable operation of a facility or system of class I or higher, one year of which must have been in a position of direct responsible charge;
- b. Two years post high school education and a minimum two years of acceptable operation of a facility or system of class I or higher, one year of which must have been in a position of direct responsible charge;

- c. Completion of high school or equivalent, and a minimum three years of acceptable operation of a facility or system of class I or higher, one year of which must have been in a position of direct responsible charge; or
- d. A combination of education qualifications and experience that will be satisfactory to the department. No substitute may be permitted for the minimum experience requirement, unless an exception is granted under section 33.1-19-01-07.

4. Grade III.

- a. A four-year college degree and a minimum two years of acceptable operation of a facility or system of class II or higher, two years of which must have been in a position of direct responsible charge;
- b. Two years post high school education and a minimum three years of acceptable operation of a facility or system of class II or higher, two years of which must have been in a position of direct responsible charge;
- c. Completion of high school or equivalent, and a minimum four years of acceptable operation of a facility or system of class II or higher, two years of which must have been in a position of direct responsible charge; or
- d. A combination of education qualifications and experience that will be satisfactory to the department. No substitute may be permitted for the minimum experience requirement, unless an exception is granted under section 33.1-19-01-07.

5. Grade IV.

- a. A four-year college degree and a minimum three years of acceptable operation of a facility or system of class III or higher, two years of which must have been in a position of direct responsible charge;
- b. Two years of post high school education and a minimum four years of acceptable operation of a facility or system of class III or higher, two years of which must be in a position of direct responsible charge;
- c. Completion of high school or equivalent and a minimum five years of acceptable operation of a facility or system of class III or higher, two years of which must have been in a position of direct responsible charge; or
- d. A combination of education qualifications and experience that will be satisfactory to the department. No substitute may be permitted for the minimum experience requirement, unless an exception is granted under section 33.1-19-01-07.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

33.1-19-01-13. [Reserved]

33.1-19-01-14. [Reserved]

33.1-19-01-15. [Reserved]

33.1-19-01-16. Substitutions or equivalents.

In determining the qualifications of operators desiring to be certified, the following substitutions or equivalents may be used:

1. One year of acceptable operating experience may be considered equivalent to one year of high school.
2. Experience applied to the educational requirement may not also be applied to the experience requirement.
3. An acceptable high school equivalency certificate may be used to substitute for graduation from high school.
4. No substitutions or equivalents will be allowed in lieu of the minimum acceptable experience in the operation of water treatment, water distribution and storage, wastewater treatment, and wastewater collection and transfer facilities or systems.
5. The department may waive the experience requirements in an exceptional set of circumstances.

History: Effective _____, 2018.

General Authority: NDCC 23.1-07-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-07-03, 23.1-07-06; S.L. 2017, ch. 199, § 22

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-20 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-20

SOLID WASTE MANAGEMENT AND LAND PROTECTION

Chapter

- 33.1-20-01 [Reserved]
- 33.1-20-01.1 General Provisions
- 33.1-20-02 [Reserved]
- 33.1-20-02.1 Permit Provisions and Procedures
- 33.1-20-03 [Reserved]
- 33.1-20-03.1 Permit Application Provisions
- 33.1-20-04 [Reserved]
- 33.1-20-04.1 General Performance Standards
- 33.1-20-05 [Reserved]
- 33.1-20-05.1 Inert Waste Landfills
- 33.1-20-06 [Reserved]
- 33.1-20-06.1 Municipal Waste Landfills
- 33.1-20-07 [Reserved]
- 33.1-20-07.1 Small Volume Industrial Waste Landfills and Special Waste Landfills
- 33.1-20-08 [Reserved]
- 33.1-20-08.1 Surface Impoundment Provisions
- 33.1-20-09 Land Treatment Provisions
- 33.1-20-10 Large Volume Industrial Waste and MSW Ash Landfills
- 33.1-20-11 Landfill Disposal of Technologically Enhanced Naturally Occurring Radioactive Material Waste
- 33.1-20-12 Regulated Infectious Waste
- 33.1-20-13 Water Protection Provisions
- 33.1-20-14 Financial Assurance Requirements
- 33.1-20-15 Solid Waste Management Fees
- 33.1-20-16 Certification of Operators
- 33.1-20-17 District Solid Waste Management Plans
- 33.1-20-18 Solid Waste Management Fund

CHAPTER 33.1-20-01
[RESERVED]

CHAPTER 33.1-20-01.1
GENERAL PROVISIONS

Section

- 33.1-20-01.1-01 Purpose
- 33.1-20-01.1-02 Applicability
- 33.1-20-01.1-03 Definitions

- 33.1-20-01.1-04 Care and Disposal of Solid Waste
- 33.1-20-01.1-04.1 Storage Containers and Areas
- 33.1-20-01.1-05 Collection and Transportation Vehicles
- 33.1-20-01.1-06 Hazardous Waste
- 33.1-20-01.1-07 Pesticide Waste
- 33.1-20-01.1-08 Asbestos Waste
- 33.1-20-01.1-09 Radioactive Waste
- 33.1-20-01.1-10 [Reserved]
- 33.1-20-01.1-11 Industrial Waste and Special Waste
- 33.1-20-01.1-12 Waste Treatment
- 33.1-20-01.1-13 Certified Laboratory
- 33.1-20-01.1-14 Variances

33.1-20-01.1-01. Purpose.

It is the purpose of this article to provide performance criteria and standards for the management of solid waste in a manner that will control nuisance and litter, protect the public health, safety, and welfare, and prevent or minimize injury of environmental resources from exposure to solid waste or constituents of solid waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-02. Applicability.

Any person who operates or proposes to operate any type of solid waste management system, unit, or facility and any person who transports solid waste, is subject to the provisions of this article.

This article does not apply to the following:

1. The management of hazardous waste at hazardous waste management units or facilities as defined by chapter 33.1-24-01;
2. Solid waste management units which do not receive solid waste after October 9, 1993, except closure standards apply;
3. Recycled agricultural material;
4. The disposal of household waste generated by any individual who resides on unplatted land in unincorporated areas of this state, on that person's property, unless handling of this waste is not in keeping with the purpose of this article;
5. The beneficial use or reuse of materials, substances, energy, or other products derived from a resource recovery activity;
6. Additional exemptions of certain requirements as specified in provisions of this article; or
7. Agricultural waste from a farming operation that is disposed on land owned by the farming operation and which is not likely to pollute the waters of the state.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09, 23.1-08-22; S.L. 2017, ch. 199, § 23

33.1-20-01.1-03. Definitions.

The terms used throughout this title have the same meaning as in North Dakota Century Code chapter 23.1-08, except:

1. "Agricultural processing operation" means a facility that processes crops, livestock, or other agricultural products in preparation for wholesale or retail sale to the public such as meat packing, the milling of grain, the selling of livestock by licensed livestock auction facilities, or other similar activities.
2. "Agricultural waste" means solid waste derived from the production and processing of crops and livestock such as manure, spoiled grain, grain screenings, undigested rumen material, livestock carcasses, fertilizer, and fertilizer containers, but does not include pesticide waste or pesticide containers.
3. "Airport" means public-use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.
4. "Aquifer" means a geological formation, group of formations, or portion of formation capable of yielding significant quantities of ground water to wells or springs.
5. "Closed unit" means a landfill or surface impoundment or a portion thereof that has received solid waste for which closure is complete.
6. "Closure" means the taking of those actions to close and reclaim a solid waste management unit or facility. Closure actions may include, but are not limited to, sloping filled areas to provide adequate drainage, applying final cover, providing erosion control measures, grading and seeding, installing monitoring devices, constructing surface water control structures, installing gas control systems, and measures necessary to secure the site.
7. "Commercial waste" means solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities exclusive of household waste, industrial waste, and special waste.
8. "Compliance boundary" means the vertical planar surface that extends downward into the uppermost aquifer and that circumscribes the waste management units at which water quality standards or maximum concentration limits apply.
9. "Composting" means the controlled biological decomposition of organic solid waste under aerobic conditions.
10. "Detachable container" means a reusable container for the collection, storage, or transportation of solid waste that is mechanically loaded or handled (for example, "dumpsters" and "rolloffs").
11. "Drop box facility" means a facility used for the placement of a detachable container including the area adjacent for necessary entrance and exit roads, unloading, and turn-around areas. Drop box facilities normally serve the general public with loose loads and receive solid waste from off-site.

12. "Energy conversion facility" has the same meaning as in North Dakota Century Code subsection 5 of section 49-22-03, except that refining of liquid hydrocarbon products is excluded.
13. "Existing unit" means a landfill or surface impoundment or a portion thereof that is receiving or has received solid waste for which closure has not been completed.
14. "Facility" means all contiguous land and structures, other appurtenances, and improvements on land which include one or more solid waste management units, such as a transfer station, solid waste storage building, a solid waste processing system, a resource recovery system, an incinerator, a surface impoundment, a surface waste pile, a land treatment area, or a landfill. A facility may or may not be used solely for solid waste management.
15. "Farming operation" means the production or raising of crops or livestock. Production or raising of crops or livestock includes the following:
- a. Cultivating, growing, or harvesting agricultural crops;
 - b. Breeding, feeding, grazing, or finishing of livestock; or
 - c. Raising or producing poultry or unprocessed poultry products, unprocessed milk or dairy products, unprocessed livestock products such as wool, or unprocessed fruits, vegetables, or other horticultural products.
- The term "farming operation" includes any concentrated or confined animal feeding operation regulated under North Dakota Century Code chapter 61-28 or North Dakota Administrative Code chapter 33.1-16-03.1 that recycles or applies its manure and other residual agricultural material to soils as recycled agricultural material, but does not include a concentrated or confined animal feeding operation that generates manure or other residual agricultural material that is discarded as agricultural waste. The term "farming operation" does not include any processing of crops, livestock, or other agricultural products by an agricultural processing operation.
16. "Final cover" means any combination of compacted or uncompacted earthen material, synthetic material, and suitable plant growth material which, after closure, will be permanently exposed to the weather and which is spread on the top and side slopes of a landfill or facility.
17. "Floodplain" means the lowland and relatively flat areas adjoining inland and coastal waters that are inundated by an one-hundred-year flood.
18. "Free liquid" means the liquid which separates from the solid portion of a solid waste under ambient pressure and normal, above freezing temperature. The environmental protection agency paint filter liquids test method or visual evidence must be used to determine if a waste contains free liquid.
19. "Garbage" means putrescible solid waste such as animal and vegetable waste resulting from the handling, preparation, cooking, and consumption of food, including wastes from markets, storage facilities, and processing plants.
20. "Gas condensate" means the liquid generated as a result of gas recovery processes at a landfill disposal unit.

21. "Ground water" means water below the land surface in a geologic unit in which soil pores are filled with water and the pressure of that water is equal to or greater than atmospheric pressure.
22. "Hazardous waste" has the meaning given by North Dakota Century Code section 23.1-04-02 and further defined in chapter 33.1-24-02.
23. "Household waste" means solid waste, such as trash and garbage, normally derived from households, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas.
24. "Incinerator" has the meaning given by section 33.1-15-01-04.
25. "Industrial waste" has the same meaning as in North Dakota Century Code section 23.1-08-02. Such waste may include, but is not limited to, residues or spills of any industrial or manufacturing process and waste resulting from the following: fertilizer/agricultural chemicals; food and related products/byproducts; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; textile manufacturing; transportation equipment; petroleum refining; and the combustion of municipal waste or regulated infectious waste.
26. "Inert waste" means nonputrescible solid waste which will not generally contaminate water or form a contaminated leachate. Inert waste does not serve as food for vectors. Inert waste includes, but is not limited to: construction and demolition material such as metal, wood, bricks, masonry and cement concrete; asphalt concrete; metal; tree branches; bottom ash from coal fired boilers; and waste coal fines from air pollution control equipment.
27. "Land treatment" means the controlled application of solid waste, excluding application of animal manure, into the surface soil to alter the physical, chemical, and biological properties of the waste.
28. "Landfill" has the meaning given by North Dakota Century Code section 23.1-08-02 and that is not a land treatment unit, surface impoundment, injection well, or waste pile.
29. "Lateral expansion" means a horizontal extension of the waste boundaries of an existing landfill disposal unit.
30. "Leachate" means a liquid that has passed through or emerged from solid waste and contains soluble, suspended or miscible materials removed from such waste.
31. "Leachate removal system" means any combination of landfill base slopes, liners, permeable zones, pipes, detection systems, sumps, pumps, holding areas or retention structures, treatment systems, or other features that are designed, constructed, and maintained to contain, collect, detect, remove, and treat leachate.
32. "Lower explosive limit" means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at twenty-five degrees Celsius [77 degrees Fahrenheit].

33. "Municipal waste incinerator ash" means the residue produced by the incineration or gasification of municipal waste.
34. "Nutrient management plan" means a plan prepared by any concentrated or confined animal feeding operation regulated under North Dakota Century Code chapter 61-28 or North Dakota Administrative Code chapter 33.1-16-03, or by any agricultural processing operation. This plan shall be submitted to the department for approval and describe the method and schedule by which the recycled agricultural materials generated or stored by the operation are recycled or applied to the land at appropriate agronomic rates as nutrients or fertilizers, rather than discarded as agricultural waste. An approved nutrient management plan must address water pollution, odor, and other environmental and public health problems that are relevant because of size, location, or other environmental factors, and may include the following elements:
- a. Recycled agricultural material handling and storage, including construction and maintenance of buildings, feedlots, collection systems, storage systems with adequate storage and integrity, and diversion of runoff and flowing surface water from contact with the storage systems and the recycled agricultural material;
 - b. Land application of recycled agricultural material, including soils testing, transportation, timing and methods of application, and nutrient management;
 - c. Conservation management practices, including injection or tillage of the recycled agricultural materials into the soils, crop residue and pasture management practices, use of conservation buffers, and other conservation practices that prevent water pollution from land application of recycled agricultural materials;
 - d. Recordkeeping, including the place, date, and amount of recycled agricultural material applied per acre, plus records of any testing;
 - e. Feed management; and
 - f. Other utilization options where residual agricultural materials are recycled.
35. "Operator" means the person responsible for the overall operation of a facility or part of a facility.
36. "Owner" means the person who owns a facility or part of a facility.
37. "Plan of operation" means the written plan developed by an owner or operator of a facility detailing how a facility is to be operated during its active life.
38. "Postclosure period" means the period of time following closure of a solid waste management unit during which the owner or operator must perform postclosure activities.
39. "Processing" means an operation designed to separate, shred, compress, or otherwise modify a recyclable material to facilitate the transport or resource recovery of the material.
40. "Radioactive waste" means solid waste containing radioactive material and subject to the requirements of article 33.1-10.

41. "Recyclable material" means a solid waste material that has been segregated for recycling or converted into a raw material, substitute for a raw material, or a commodity.

42. "Recycled agricultural material" means agricultural waste generated by a farming operation or agricultural processing operation that is recycled or applied to soils as a nutrient or as a fertilizer at appropriate agronomic rates, or that is left in place on soils during harvesting, grazing or other similar agricultural activities. Recycled agricultural materials also include:

a. Material, including manure, generated by any concentrated or confined animal feeding operation regulated under North Dakota Century Code chapter 61-28 or North Dakota Administrative Code chapter 33.1-16-03 that is stored in a feedlot or waste storage structure, provided that the material is stored in a manner that is not likely to pollute the waters of the state, and recycled or applied to soils as nutrients or fertilizers in accordance with an approved nutrient management plan; or

b. Material, including manure, generated by any agricultural processing operation that is stored in a manner that is not likely to pollute the waters of the state, and recycled or applied to soils as nutrients or fertilizers in accordance with an approved nutrient management plan.

Recycled agricultural material does not include agricultural waste that is discarded as garbage, refuse, or other solid waste.

43. "Recycling" means collecting, sorting, or recovering material that would otherwise be solid waste and performing all or part of a method or technique, including processing, to create a recyclable material.

44. "Runoff" means any snowmelt, rainwater, leachate, or other liquid that drains from any part of a facility over another part of the facility or over land adjoining the facility.

45. "Run-on" means any snowmelt, rainwater, or other liquid that drains from land adjoining a facility onto any part of the facility or that drains from one part of the facility onto another part of the facility.

46. "Scavenging" means uncontrolled removal of solid waste materials from any solid waste management facility.

47. "Sequential partial closure" means bringing discrete, usually adjacent, portions of a disposal facility to elevation and grade in an orderly, continually progressing process as part of the operations of the facility for facilitating closure.

48. "Sludge" means solid waste in a semisolid form consisting of a mixture of solids and water, oils, or other liquids.

49. "Suitable plant growth material" means that soil material (normally the A and the upper portion of B horizons which are dark colored due to organic staining) which, based upon a soil survey, is acceptable as a medium for plant growth when respread on the surface of regraded areas.

50. "Surface impoundment" means a human-made excavation, diked area, or natural topographic depression designed to hold an accumulation of solid waste which is liquid, liquid bearing, or sludge for containment, treatment, or disposal.

51. "Technologically enhanced naturally occurring radioactive material (TENORM)" means naturally occurring radioactive material whose radionuclide concentrations are increased by or as a result of past or present human practices. TENORM does not include background radiation or the natural radioactivity of rocks or soils. TENORM does not include "source material" and "byproduct material" as both are defined in the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.] and relevant regulations implemented by the United States nuclear regulatory commission.
52. "Transfer station" means a site or building used to transfer solid waste from a vehicle or a container, such as a rolloff box, into another vehicle or container for transport to another facility.
53. "Treatment" means a method or process designed to change the physical, chemical, or biological character or composition of a solid waste or leachate so as to neutralize the waste or leachate or so as to render the waste or leachate safer for public health or environmental resources during transport, storage, or disposal. The term does not include resource recovery.
54. "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.
55. "Waste pile or pile" means any noncontainerized accumulation of nonflowing solid waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 61-28-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 61-28-04; S.L. 2017, ch. 199, § 23

33.1-20-01.1-04. Care and disposal of solid waste.

1. Any person who owns or operates any premises, business establishment, or industry is responsible for the solid waste management activities, such as storage, transportation, resource recovery, or disposal, of solid waste generated or managed at that person's premises, business establishment, or industry.
2. No solid waste may be delivered to a facility which is not in compliance with this article or abandoned upon any street, alley, highway, public place, or private premises.
3. Solid waste must be stored, collected, and transported in a manner that provides for public safety, prevents uncontrolled introduction into the environment, and minimizes harborage for insects, rats, or other vermin.
4. Except in unincorporated areas of this state, household waste must be removed from the premises or containers at regular intervals not to exceed seven days and transported to a solid waste management unit or facility.
5. Used oil, lead-acid batteries, major appliances, and scrap metal may not be collected or transported for disposal to any solid waste disposal unit or facility unless such unit or facility has provision for intermediate storage and recycling of these materials and all such materials are appropriately segregated for recycling.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

33.1-20-01.1-04.1. Storage containers and areas.

All household wastes are to be stored in the manner provided by this section.

1. Storage containers.

a. Single-use containers.

(1) Single-use containers, such as paper or plastic bags, liners, or cartons, must have a maximum capacity of thirty-two gallons [121.1 liters] unless otherwise allowed by the local unit of government, must be leakproof and must be puncture resistant. Paper bags must be specifically designed for solid waste containment or disposal.

(2) Paper containers may not be used for outside storage unless supported by wall-mounted or freestanding holders or frames. When filled, the container top must be tied, stapled, or crimped to completely confine the contents.

b. Residential containers.

(1) Reusable residential containers must be rigid and durable, nonabsorbent, watertight, tapered, corrosion resistant, rodentproof, easily cleanable, and have a flytight cover. These containers must be covered except when adding or removing waste.

(2) Residential containers must have a maximum capacity of thirty-two gallons [121.1 liters].

(3) When residential containers are kept in the outdoor environment, storage racks or supports must be provided to minimize corrosion, to prevent breeding of insects, and to prevent rodent harborage. The bottom of the racks or supports must be at least one foot [30.5 centimeters] above ground level. The covers may be chained to the rack or to a permanent structure.

c. Bulk containers. Bulk containers or detachable containers, such as dumpsters, must be constructed of rigid and durable, rust-resistant and corrosion-resistant material, be equipped with tight-fitting lids or doors to prevent entrance of insects or rodents, and must be leakproof. Lids and covers must be closed except when adding or removing waste.

2. Enclosed storage areas.

a. Storage rooms, buildings, or areas must be of rodentproof construction which is readily cleanable with proper drainage.

b. Storage rooms or buildings, if not refrigerated, must be adequately vented and all openings must be screened.

3. Maintenance of containers and enclosed storage areas.

a. All containers and enclosed areas for storage of solid waste must be maintained in good repair and in a manner as necessary to prevent litter, nuisances, odors, insect breeding, and rodents.

b. Containers that are broken or otherwise fail to meet requirements of this section must be replaced with complying containers.

4. **Unconfined waste.** Unless special service or special equipment is provided by the collector for handling unconfined waste materials such as trash, brush, leaves, tree cuttings, newspapers and magazines, and other debris for manual pickup and collection, these materials must be in securely tied bundles or in boxes, sacks, or other receptacles and solid waste so bundled may not exceed fifty pounds [22.7 kilograms] in weight and four feet [1.8 meters] in length. Such wastes may not be placed out for collection twenty-four hours before scheduled pickup.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-05. Collection and transportation vehicles.

1. Vehicles used for the commercial collection and transportation of any residue, sludge, agricultural, inert, industrial waste, or special waste must be loaded and moved in such a manner that the contents will not fall, leak, or spill therefrom. Where spillage does occur, the collector or transporter shall immediately return spilled waste to the vehicle or container and, if necessary, clean and decontaminate the area.

2. Vehicles used for the commercial collection and transportation of regulated infectious waste, household waste, or municipal waste incinerator ash must be fully leakproof and fully enclosed or covered to prevent scattering of material. Regulated infectious waste may not be subject to mechanical stress or compaction during loading, unloading, and transit. Any spilled material must be immediately returned to the transport vehicle or container and, if necessary, the area must be cleaned and decontaminated.

3. The cargo-carrying body of a vehicle used for commercial collection or transportation of solid waste must be maintained in good repair and in sanitary condition.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-06. Hazardous waste.

The management of hazardous waste is regulated under article 33.1-24, except as otherwise provided in this article and section.

1. Containers having hazardous waste in excess of normal household quantities, which are not managed under article 33.1-24, must be marked to designate the content as toxic, explosive, or otherwise hazardous in a manner designed to give adequate warning to any person conducting the collection, transport, resource recovery, or disposal of the waste.

2. Every person who transports hazardous waste shall have a valid solid waste transporters permit, unless exempted by section 33.1-20-02-01.

3. Owners and operators of disposal, resource recovery, or solid waste processing facilities may not knowingly store, treat, handle, or dispose of hazardous waste in amounts that are in excess of quantities normally in household waste, unless the requirements of article 33.1-24 are met.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-07. Pesticide waste.

Every person who handles surplus agricultural pesticides and pesticide containers shall comply with this article, section 33.1-15-10-02, and North Dakota Century Code section 4.1-33-17. Surplus pesticides may not be discarded in any manner which endangers humans, animals, and the environment. Pesticide containers must be drained empty according to label directions and power or triple-rinsed before processing or disposal.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-08. Asbestos waste.

Every person who handles and disposes of asbestos waste shall comply with section 33.1-15-13-02 and this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-09. Radioactive waste.

Every person who handles and disposes of radioactive waste shall comply with article 33.1-10. Every person who handles and disposes of TENORM shall also comply with the applicable requirements of this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-01.1-10. [Reserved]

33.1-20-01.1-11. Industrial waste and special waste.

Every person who generates industrial waste or special waste or who operates a landfill for disposal of municipal waste, industrial waste, or special waste shall comply with this article and this section.

1. Industrial waste, except as provided by subsection 3:

- a. May be codisposed with municipal waste in a municipal waste landfill in amounts less than or equal to ten percent by month of the weight of the municipal waste, except that the accumulated amount of industrial waste must not exceed twenty thousand tons [18,143.69 metric tons] per year or three thousand tons [2,721.55 metric tons] in any one month; or
 - b. May be disposed in a landfill which complies with chapter 33.1-20-07.1, except that the accumulated amount must not exceed twenty-five thousand tons [22,679.62 metric tons] per year or three thousand tons [2,721.55 metric tons] in any one month unless larger amounts in one month resulting from remediation of spills or cleanup projects are approved by the department; or
 - c. Otherwise must be disposed in a landfill which complies with chapter 33.1-20-10 when the amount exceeds twenty-five thousand tons [22,679.62 metric tons] per year.
2. The disposal of special waste must comply with chapter 33.1-20-07.1
 3. The disposal of municipal waste (MSW) incinerator ash in an accumulated amount greater than three thousand tons [2,721.55 metric tons] per year must comply with chapter 33.1-20-10.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-12. Waste treatment.

The department may require the treatment of a solid waste which may have incompatible characteristics with another solid waste prior to or during codisposal or which may produce a constituent in the waste's laboratory extract or leachate that exceeds twenty percent of a toxicity standard provided by section 33.1-24-02-14 or ten parts per million polychlorinated biphenols. The department must consider factors such as the site hydrogeological characteristics, toxicity of the waste, anticipated leachate quality, mobility of waste constituents, fate of leachate constituents during migration, potential site capacity, or local uses of waters of the state.

1. Treatment, when performed, must reduce:
 - a. Toxicity of the waste; or
 - b. The mobility of constituents contained in or derived from the waste into leachate; or
 - c. Both the toxicity and mobility.
2. When treatment is required, the generator of the solid waste or the owner or operator of the facility at which the waste would be treated must provide a demonstration of the treatment technology for approval by the department.
3. An owner or operator may propose and demonstrate treatment of solid waste so as to remove or separate toxic materials or constituents from the waste prior to disposal. In evaluating the demonstration, the department shall consider such factors as technical feasibility; the proposed management of the removed or separated waste materials or constituents; the physical, chemical, and biological processes affecting fate and

transport; relative degree of removal of the toxic materials or constituents; or the resulting characteristics of the waste or leachate. If the treatment achieves leachate concentrations of constituents in or derived from the remaining waste which are less than the standards of article 33.1-16, the department may reduce or waive one or more of the criteria of this article which are enumerated in one or more of the following subdivisions:

- a. The liner or hydraulic barrier.
- b. The leachate removal system.
- c. The site efficiency for collection or rejection of precipitation that falls on the landfill.
- d. The ground water monitoring plan and system.
- e. The plan of operation.
- f. The postclosure plan and postclosure period.
- g. Recordkeeping and reporting.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-13. Certified laboratory.

All waste, leachate, and water analysis required by article 33.1-20 must be conducted by a laboratory approved by the department's certification procedures.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-01.1-14. Variances.

Whereupon written application the department finds that by reason of exceptional circumstances strict conformity with any provisions of this article would cause undue hardship or would be unreasonable, impractical, or not feasible under the circumstances, the department may permit a variance from this article upon such conditions and within such time limitations as it may prescribe.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-02

[RESERVED]

CHAPTER 33.1-20-02.1

PERMIT PROVISIONS AND PROCEDURES

Section

33.1-20-02.1-01 Solid Waste Management Permit Required

<u>33.1-20-02.1-02</u>	<u>Permits by Rule</u>
<u>33.1-20-02.1-03</u>	<u>Permit Compliance</u>
<u>33.1-20-02.1-04</u>	<u>Record of Notice</u>
<u>33.1-20-02.1-05</u>	<u>Property Rights</u>
<u>33.1-20-02.1-06</u>	<u>Permit Modification, Suspension, or Revocation</u>
<u>33.1-20-02.1-07</u>	<u>Renewal of Permit</u>

33.1-20-02.1-01. Solid waste management permit required.

Every person who treats or transports solid waste or operates a solid waste management unit or facility is required to have a valid permit issued by the department, unless the activity is an emergency, exemption, or exception as provided in this section.

1. If the department determines an emergency exists, it may issue an order citing the existence of such emergency and require that certain actions be taken as necessary to meet the emergency in accordance with the provisions of North Dakota Century Code section 23.1-08-19.
2. A solid waste management permit is not required for the following activities or facilities:
 - a. Backyard composting of leaves, grass clippings, or wood chips;
 - b. A collection point for parking lot or street sweepings;
 - c. Collection sites for wastes collected and received in sealed plastic bags from such activities as periodic cleanup campaigns for cities, rights of way, or roadside parks;
 - d. Places which receive one or more recyclable materials, excluding garbage, for storage or for processing after which the material is transported for resource recovery, disposal, or storage;
 - e. Onsite incinerators used by hospitals, clinics, laboratories, or other similar facilities solely for incineration of commercial waste or infectious waste generated onsite;
 - f. Rock and dirt fills that receive any combination of rock, dirt, or sand; and
 - g. Surface impoundments for storage, handling, and disposal of oil and gas exploration and production wastes on a lease or area permitted through the North Dakota industrial commission under North Dakota Century Code section 38-08-04.
 - h. The disposal into the mine spoils of the following wastes generated in the mining operation:
 - (1) Rock, boulders, and dirt; and
 - (2) Trees and brush.
 - i. The disposal of the following mining operation wastes into areas designated in a surface coal mining permit issued by the North Dakota public service commission for such disposal:
 - (1) Inert waste from inspected farmsteads;
 - (2) Wood materials including pallets, lumber, lathe, cables, and fenceposts;

(3) Brick, concrete block, and cured concrete; and

(4) Plastic material and pipe.

3. A permit for the transportation of solid waste is not required by persons who:

a. Transport solely their own waste to a solid waste management unit or facility;

b. Transport waste entirely within a facility regulated under this article or entirely on their property; or

c. Transport a recyclable material other than used oil or scrap tires.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-02. Permits by rule.

The owner or operator of the following facilities is deemed to have obtained a permit for a solid waste management facility without making application for it as long as the owner or operator remains in compliance with section 33.1-20-04.1-01 and the rules and requirements provided in the respective subsections of this section:

1. A facility for inert waste operated for municipalities which together have one thousand or fewer people provided:

a. The owner or operator of a new facility or lateral expansion of a landfill notifies the department, on forms available from the department, ninety days prior to any construction;

b. The facility is in compliance with sections 33.1-20-02.1-04, 33.1-20-04.1-02, and 33.1-20-04.1-09 and with chapter 33.1-20-05.1.

2. A drop box facility in compliance with subsection 2 of section 33.1-20-04.1-06.

3. A waste pile for composting only grass and leaves that is operated for ten thousand or fewer people in compliance with section 33.1-20-04.1-07 provided the owner or operator notifies the department, on forms available from the department, ninety days prior to construction.

4. A pile of scrap tires accumulated by a tire dealer, a municipality, or a county which contains either one thousand three hundred or fewer car tires, twenty-five tons [22.7 metric tons] or less of shredded tires or a pile of tires, which is equivalent in volume to one twin-axle semitrailer load or less, provided that no public nuisance is created and the following requirements are addressed:

a. Access to the facility is monitored or controlled;

b. The location is accessible by fire control and emergency equipment; and

c. The owner or operator has appropriate provisions and financial arrangements for the recycling or disposal of tires.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-03. Permit compliance.

All solid waste management facilities and activities must be performed, constructed, operated, and closed in a manner consistent with the permit application and subject to any modifications specified through permit conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-04. Record of notice.

1. Within sixty days of the issuance of a permit for any landfill, surface impoundment or land treatment unit if not already completed, the owner or operator shall record a notarized affidavit with the county register of deeds. The affidavit must specify that this facility, as noted in the legal description, is permitted to accept solid waste for disposal. This affidavit must specify that another affidavit must be recorded upon the facility's final closure.
2. Within sixty days of completion of final closure of any landfill, surface impoundment or land treatment facility and prior to sale or lease of the property on which the facility is located, the owner shall comply with North Dakota Century Code section 23.1-08-21. The record or plat shall, in perpetuity, notify any person conducting a title search that the land has been used as a solid waste disposal facility. The record or plat must indicate the types and quantities of solid waste placed in the site and details on the site's construction, operation, or closure (including precautions against any building, earth moving, or tillage on the closed site) that are necessary to ensure the long-term maintenance and integrity of the closed facility.
3. The department must be provided a certified copy of any affidavit or plat within sixty days of recording.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-05. Property rights.

An applicant for a permit for a solid waste management unit or facility shall acquire or possess a right to the use of the property for which a permit is sought, including the access route thereto. After closure, the applicant shall maintain the right of access to the site throughout the postclosure period.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-06. Permit modification, suspension, or revocation.

1. A permit may be modified, suspended, revoked, or denied by the department for reasons pertaining to: circumstances which do not meet the purpose and provisions of this article.

the provisions of the permit, or the plans and specifications submitted as part of the application for permit; or, violations of any applicable laws or rules. The department shall provide written notice to the permittee.

2. If a change occurs during the life of a permit for transporting solid waste (such as the number or type of vehicles used to transport waste, the service area, the waste categories transported, or the solid waste management facilities use), the permittee shall notify the department in writing within thirty days.

3. If a change occurs during the life of a permit for a solid waste management unit or facility, as specified in subsection 4, the permittee shall apply for and receive a modification of the permit prior to enacting the change. Routine maintenance, repair, or replacement, or an increase in hours of operations may not be considered a construction or operation change. Changes, including frequency of monitoring and reporting, waste sampling or analysis method, schedules of compliance, and revised cost estimates for closure and postclosure may be effected through written notice to and approval by the department.

4. The following changes at a permitted solid waste management unit or facility require a permit modification:

a. A change to the facility boundaries or acreage;

b. An increase in average daily solid waste specified in the permit or permit application, calculated by weight or volume for any twelve consecutive months;

c. A change in the solid waste characteristics;

d. An increase or decrease in finished height or finished slope of a landfill;

e. Any increase in landfill trench or excavation depth;

f. A change in facility site development which will result in impact to or encroachment into a one hundred-year floodplain, a ravine, a wetland, or a drainageway;

g. A change in site drainage or management of runoff or run-on;

h. A change in facility site development which will result in disposal of wastes closer to site boundaries than originally approved;

i. The addition of solid waste management units, which, if sited independently, would require a permit; or

j. Other changes that could have an adverse effect on the safety, health, or welfare of nearby residents, property owners, or the environment.

5. An application for modification of a solid waste management unit or facility shall follow the procedures and provisions of section 33.1-20-03.1-02.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-02.1-07. Renewal of permit.

An application for renewal of any permit must be submitted at least sixty days prior to the expiration date. The application for renewal must follow the procedures and provisions of section 33.1-20-03.1-02. The conditions of an expired permit continue in force until the effective date of a new permit, if the permittee has submitted a timely and complete application for a new permit and the department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-03

[RESERVED]

CHAPTER 33.1-20-03.1
PERMIT APPLICATION PROVISIONS

Section

<u>33.1-20-03.1-01</u>	<u>Preapplication Procedures</u>
<u>33.1-20-03.1-02</u>	<u>Permit Application Procedures</u>
<u>33.1-20-03.1-03</u>	<u>Permit Application Review and Action</u>
<u>33.1-20-03.1-04</u>	<u>Existing Permits</u>
<u>33.1-20-03.1-05</u>	<u>Existing Nonpermitted Facilities</u>
<u>33.1-20-03.1-06</u>	<u>Permit Application Review Timeline</u>

33.1-20-03.1-01. Preapplication procedures.

1. For all new solid waste management facilities subject to the location standards of subsection 2 of section 33.1-20-04.1-01, a preapplication consisting of a preliminary facility description and a site assessment must be submitted to the department for review prior to submitting a permit application.
 - a. The preliminary facility description must include, at a minimum, the location of the facility; a projection of capacity, size, daily waste receipts, type of waste accepted, years of operation, description of operation, and costs; and a discussion of the proposed facility's compliance with local zoning requirements and the district waste management plan.
 - b. The preliminary site assessment must include available information pertaining to the site's geology, hydrogeology, topography, soils, and hydrology based on existing information.
2. Within sixty days of receipt of a preapplication, the department will provide written notification of approval or disapproval of the preapplication. If, after review of all information received, the department makes the determination to disapprove the preapplication, the department shall inform the applicant in writing of the reasons for the disapproval. If the preapplication is disapproved, the applicant may submit a new preapplication. A disapproval must be without prejudice to the applicant's right to a hearing before the department pursuant to North Dakota Century Code chapter 28-32.

3. An application may be filed only after approval of the preapplication and a finding by the department, after consultation with the state geologist and state engineer, that the site is geologically and hydrogeologically suitable for further evaluation and consideration.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09, 23.1-08-13, 23.1-08-17; S.L. 2017, ch. 199, § 23

33.1-20-03.1-02. Permit application procedures.

1. An application for a permit must be submitted on forms available from the department by any person desiring to transport solid waste or to establish, construct, or operate a solid waste management unit or facility.
2. The application for a permit must be prepared by the applicant or the applicant's authorized agent and signed by the applicant.
3. Four copies of the application and supporting documents are required to be submitted to the department with the fee specified in chapter 33.1-20-15.
4. Upon the submission of an application for a permit for a new solid waste management unit or facility, the applicant shall publish a public notice indicating that an application has been submitted to the department. The public notice must indicate the type and location of the unit or facility and must be made by two separate publications in the official county newspaper in the county in which the site or operation is located. The applicant shall provide proof of publication by submitting to the department, within sixty days after the second publication of the notice, and affidavit from the publisher accompanied by a copy of the published notice, which shows the date of publication. The department may require public notice for facility changes listed in subsection 4 of section 33.1-20-02.1-06.
5. Applicants proposing a solid waste management facility in a mining permit area for disposal of coal processing waste must also file a copy of the application with the public service commission in accordance with subdivision a of subsection 1 of section 69-05.2-19-02.
6. Applications for a solid waste management unit or facility permit must include the following information where applicable:
 - a. A completed application form, subsection 1;
 - b. A description of the anticipated physical and chemical characteristics, estimated amounts, and sources of solid waste to be accepted, including the demonstration required by North Dakota Century Code section 23.1-08-14;
 - c. The site characterization of section 33.1-20-13-01 and a demonstration that the site fulfills the location standards of section 33.1-20-04.1-01;
 - d. Soil survey and segregation of suitable plant growth material;
 - e. Demonstrations of capability to fulfill the general facility standards of section 33.1-20-04.1-02;

- f. Facility engineering specifications adequate to demonstrate the capability to fulfill performance, design, and construction criteria provided by this article and enumerated in this subdivision;
 - (1) Transfer stations and drop box facilities, section 33.1-20-04.1-06.
 - (2) Waste piles, section 33.1-20-04.1-07.
 - (3) Resource recovery, section 33.1-20-04.1-08.
 - (4) Land treatment, sections 33.1-20-04.1-09 and chapter 33.1-20-09.
 - (5) Surface impoundments, sections 33.1-20-04.1-09 and chapter 33.1-20-08.1.
 - (6) Any disposal, section 33.1-20-04.1-09.
 - (7) Inert waste landfill, chapter 33.1-20-05.1.
 - (8) Municipal waste landfill, chapter 33.1-20-06.1.
 - (9) Industrial waste landfill, chapters 33.1-20-07.1 or 33.1-20-10.
 - (10) Special waste landfill, chapter 33.1-20-07.1;
 - g. The plan of operation of section 33.1-20-04.1-03;
 - h. Demonstration of the treatment technology of section 33.1-20-01.1-12;
 - i. The place where the operating record is or will be kept, section 33.1-20-04.1-04;
 - j. Demonstration of capability to fulfill the ground water monitoring, section 33.1-20-13-02;
 - k. Construction quality assurance and quality control;
 - l. Demonstrations of capability to fulfill the closure standards, section 33.1-20-04.1-05 and otherwise provided by this article;
 - m. Demonstrations of capability to fulfill the postclosure standards, section 33.1-20-04.1-09 and otherwise provided by this article; and
 - n. A disclosure statement as required by North Dakota Century Code section 23.1-08-17.
7. Applications for a solid waste transporter's permit must include the following information:
- a. A completed application form, subsection 1;
 - b. Description of the types of solid waste to be transported, approximate quantities, and anticipated generator sources;
 - c. A list of the anticipated solid waste management facilities that will store, treat, process, recycle, or dispose the solid waste;
 - d. Description of equipment and transportation spill prevention as required by section 33.1-20-01.1-05; and

- e. A disclosure statement as required by North Dakota Century Code section 23.1-08-17.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09, 23.1-08-14, 23.1-08-17; S.L. 2017, ch. 199, § 23

33.1-20-03.1-03. Permit application review and action.

1. The department will review the applications, plans, and specifications for solid waste transporters and for solid waste management facilities and information submitted as a result of the public notices.
2. Upon completion of the department's review, the application for permit will be approved, returned for clarification and additional information, or denied.
 - a. The basis for approval must be an application which demonstrates compliance with this article and the North Dakota Century Code chapter 23.1-08.
 - b. The basis for return must be an application which is procedurally or technically incomplete, inaccurate, or deficient in detail, or which precludes an orderly review and evaluation. If the application is returned, the applicant may resubmit an application, complete with all necessary information to satisfy deficiencies. If the applicant does not resubmit an application within six months, the department shall consider the application withdrawn, and any subsequent application must be considered a new application.
 - c. The basis for denial must be an application which contains false, misleading, misrepresented, or substantially incorrect or inaccurate information; fails to demonstrate compliance with this article; proposes construction, installation, or operation of a solid waste management unit or facility which will result in a violation of any part of this article; or is made by an applicant for whom an environmental compliance background review reveals any of the circumstances listed in subsection 14 of North Dakota Century Code section 23.1-08-03.
3. If the department makes a preliminary determination to issue a permit for a solid waste management facility, the department shall prepare a draft permit. The draft permit will be available for public review and comment after the department publishes a notice of its intent to issue the permit. The public notice must be published in the official county newspaper in the county in which the solid waste management unit or facility is located and in a daily newspaper of general circulation in the area of the facility.
 - a. Interested persons may submit written comments to the department on the draft permit within thirty days of the final public notice. All written comments will be considered by the department in the formulation of its final determinations.
 - b. The department may hold a hearing if it determines there is significant public interest in holding such a hearing. Public notice for a hearing will be made in the same manner as for a draft permit. The hearing will be before the department and will be held at least fifteen days after the public notice has been published.

4. If, after review of all information received, the department approves the permit application, the department shall issue a permit. The department may impose reasonable conditions upon a permit.

5. If, after review of all information received, the department makes the determination to deny the permit, the applicant will be notified, in writing, of the denial. The department shall set forth in any notice of denial the reasons for denial. If the application is denied, the applicant may submit a new application, which will require a new public notice. A denial must be without prejudice to the applicant's right to a hearing before the department pursuant to North Dakota Century Code chapter 28-32.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-03.1-04. Permit application review timeline.

Upon receipt of a permit application, the department has one hundred twenty days to review and approve or disapprove the application and notify the applicant of the decision. The department may extend the period an additional one hundred twenty days if the applicant submits a significant change that in the department's judgment requires additional time to review.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-04

[RESERVED]

CHAPTER 33.1-20-04.1 **GENERAL PERFORMANCE STANDARDS**

Section

<u>33.1-20-04.1-01</u>	<u>General Location Standards</u>
<u>33.1-20-04.1-02</u>	<u>General Facility Standards</u>
<u>33.1-20-04.1-03</u>	<u>Plan of Operation</u>
<u>33.1-20-04.1-04</u>	<u>Recordkeeping and Reporting</u>
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<u>33.1-20-04.1-06</u>	<u>Transfer Stations, Processing Systems, and Drop Box Facilities</u>
<u>33.1-20-04.1-07</u>	<u>Piles Used for Storage and Treatment - Standards</u>
<u>33.1-20-04.1-08</u>	<u>Treatment and Resource Recovery Facilities</u>
<u>33.1-20-04.1-09</u>	<u>General Disposal Standards</u>
<u>33.1-20-04.1-10</u>	<u>Other Methods of Solid Waste Management - Standards</u>

33.1-20-04.1-01. General location standards.

1. No solid waste management facility may be located in areas which result in impacts to human health or environmental resources or in an area which is unsuitable because of reasons of topography, geology, hydrology, or soils.

2. Sites for new, or for lateral expansions of, land treatment units, surface impoundments closed with solid waste in place, municipal waste landfills, industrial waste landfills, and special waste landfills must minimize, control, or prevent the movement of waste or waste constituents with geologic conditions and engineered improvements. Sites should be underlain by materials with low permeability to provide a barrier to contaminant migration.

a. The following geographic areas or conditions must be excluded in the consideration of a site:

(1) Where the waste is disposed within an aquifer;

(2) Within a public water supply designated wellhead protection area;

(3) Within a one hundred-year floodplain;

(4) Where geologic or manmade features, including underground mines, may result in differential settlement and failure of a structure or other improvement on the facility;

(5) On the edge of or within channels, ravines, or steep topography whose slope is unstable due to erosion or mass movement;

(6) Within woody draws; or

(7) In areas designated as critical habitats for endangered or threatened species of plant, fish, or wildlife.

b. The following geographic areas or conditions may not be approved by the department as a site unless the applicant demonstrates there are no reasonable alternatives:

(1) Over or immediately adjacent to principal glacial drift aquifers identified by the state engineer;

(2) Closer than one thousand feet [304.8 meters] to a down gradient drinking water supply well;

(3) Closer than two hundred feet [60.96 meters] horizontally from the ordinary high water elevation of any surface water or wetland;

(4) Within final cuts of surface mines; or

(5) Closer than one thousand feet [304.8 meters] to any state or national park.

c. The department may establish alternative criteria based on specific site conditions.

3. No municipal waste landfill or lateral expansion may be located within ten thousand feet [3048 meters] of any airport runway currently used by turbojet aircraft or five thousand feet [1524 meters] of any runway currently used by only piston-type aircraft. Owner or operators proposing a new site or lateral expansions for a municipal waste landfill within a five-mile [8.05-kilometer] radius of an airport must notify the affected airport and the federal aviation administration.

4. A minimum horizontal separation of twenty-five feet [7.62 meters] must be maintained between new or lateral expansions of solid waste management units and any aboveground or underground pipeline or transmission line. The owner shall designate the location of all such lines and easements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-04.1-02. General facility standards.

An owner or operator of a solid waste management facility shall comply with these general facility standards:

1. All personnel involved in solid waste handling and in the facility operation or monitoring must be instructed in specific procedures to ensure compliance with the permit, the facility plans, and this article as necessary to prevent accidents and environmental impacts. Documentation of training, such as names, dates, description of instruction methods, and copies of certificates awarded, must be placed in the facility's operating record.
2. The solid waste management facility shall comply with the water protection provisions of chapter 33.1-20-13.
3. The solid waste management facility may not cause a discharge of pollutants into waters of the state unless such discharge is in compliance with requirements of the North Dakota pollutant discharge elimination system pursuant to chapter 33.1-16-01.
4. The solid waste management facility may not cause a violation of the ambient air quality standard or odor rules, article 33.1-15, at the facility boundary.
5. Suitable control measures must be taken whenever fugitive dust is a nuisance or exceeds the levels specified in article 33.1-15.
6. Open burning is prohibited except as allowed under article 33.1-15.
7. A permanent sign must be posted at the entrance of a facility, or at the entrance of a solid waste management unit used by a facility for wastes generated onsite, which indicates the following:
 - a. The name of the facility;
 - b. The permit number;
 - c. The name and telephone number of the owner and the operator if different than the owner;
 - d. The days and hours the facility is open for access;
 - e. The wastes not accepted for disposal; and
 - f. Any restrictions for trespassing, burning, hauling, or nonconforming dumping.

8. The owner or operator of a facility shall periodically inspect solid waste managed at the facility, on a schedule proposed by the owner or operator and approved by the department, to control and reject unauthorized solid wastes as specified by this article, a permit, or a plan of operation.
9. All litter or windblown rubbish, trash, or garbage must be returned to collection containers or vehicles, to storage containers or areas, or to a solid waste management facility as soon as practicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-04.1-03. Plan of operation.

All solid waste management facilities, except those permitted by rule, shall meet the requirements of this section.

1. The owner or operator of a solid waste management unit or facility shall prepare and implement a plan of operation approved by the department as part of the permit. The plan must describe the facility's operation to operating personnel and the facility must be operated in accordance with the plan. The plan of operation must be available for inspection at the request of the department. Each plan of operation must include, where applicable:

a. A description of waste acceptance procedures, including categories of solid waste to be accepted and waste rejection procedures as required by subsection 2 of section 33.1-20-05.1-02 or subsection 8 of section 33.1-20-06.1-02 or subsection 2 of section 33.1-20-07.1-01 or subsection 4 of section 33.1-20-10-03;

b. A description of waste handling procedures;

c. A description of facility inspection activities required by subsection 2, including frequency;

d. A description of contingency actions for the following:

(1) Fire or explosion;

(2) Leaks;

(3) Ground water contamination;

(4) Other releases (for example, dust, debris, failure of run-on diversion or runoff containment systems); and

(5) Any other issues pertinent to the facility.

e. Leachate removal system operation and maintenance procedures;

f. Safety procedures;

g. For landfills, implementation of sequential partial closure;

- h. A description of industrial waste or special waste management procedures, which include:
- (1) A procedure for notifying solid waste generators and haulers of the facility operating requirements and restrictions;
 - (2) A procedure for evaluating waste characteristics, liquid content, the specific analyses that may be required for specific wastes, and the criteria used to determine when analyses are necessary, the frequency of testing, and the analytical methods to be used;
 - (3) A procedure for inspecting and for identifying any special management requirements, and the rationale for accepting or rejecting a waste based on its volume and characteristics;
 - (4) Procedures for managing the following solid waste, as appropriate:
 - (a) Bulk chemical containers which contain free product or residue;
 - (b) Asbestos;
 - (c) Waste containing polychlorinated biphenyls at a concentration less than fifty parts per million;
 - (d) Radioactive waste;
 - (e) Rendering and slaughterhouse waste;
 - (f) Wastes that could spontaneously combust or that could ignite other waste because of high temperatures;
 - (g) Foundry waste;
 - (h) Ash from incinerators, resource recovery facilities, and power plants;
 - (i) Paint residues, paint filters, and paint dust;
 - (j) Sludges, including ink sludges, lime sludge, wood sludge, and paper sludge;
 - (k) Fiberglass, urethane, polyurethane, and epoxy resin waste;
 - (l) Spent activated carbon filters;
 - (m) Oil and gas exploration and production waste;
 - (n) Wastes containing free liquids;
 - (o) Contaminated soil waste from cleanup of spilled products or wastes; and
 - (p) Any other solid waste that the owner or operator plans to handle.
 - (5) The owner or operator must describe any solid waste that will not be accepted at the facility; and

- i. The owner or operator must amend the plan whenever operating procedures, contingency actions, waste management procedures, or wastes have changed. The owner or operator shall submit the amended plan to the department for approval or disapproval.
- 2. The owner or operator shall inspect the facility to ensure compliance with this article, a permit, and approved plans. The owner or operator shall keep an inspection log including information such as the date of inspection, the name of the inspector, a notation of observations made, and the date and nature of any repairs or corrective action taken.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-04.1-04. Recordkeeping and reporting.

The owner or operator of a solid waste management facility, except those permitted by rule, shall comply with these recordkeeping and reporting requirements:

- 1. A solid waste management facility may not accept solid waste until the department has received and approved a report which includes narrative, drawings, and test results to certify that the facility has been constructed in accordance with the approved plans and specifications and as required by the permit.
- 2. An owner or operator shall keep an operating record consisting of a copy of each application, plan, report, notice, drawing, inspection log, test result or other document required by this article, including those enumerated in the subdivisions of this subsection, or a permit. The operating record must include any deviations from this article, the permit, and facility plans where department approval is required. The owner or operator shall provide a copy of any document in the operating record upon receiving a request from the department. The operating record must be kept at the facility, or at a location near the facility within North Dakota and approved by the department.
 - a. The permit preapplication, section 33.1-20-03.1-01.
 - b. The permit application, section 33.1-20-03.1-02.
 - c. An amended permit application, section 33.1-20-03.1-03.
 - d. The site characterization, section 33.1-20-13-01.
 - e. Any site demonstrations, section 33.1-20-04.1-01.
 - f. Documentation of training, section 33.1-20-04.1-02.
 - g. The plan of operation, section 33.1-20-04.1-03.
 - h. Facility inspection logs, section 33.1-20-04.1-03.
 - i. Records of notice, section 33.1-20-02.1-04.
 - j. As-built drawings and certifications, sections 33.1-20-04.1-04 and 33.1-20-04.1-05.

- k. The ground water monitoring plan, all monitoring data, and statistical interpretations, section 33.1-20-13-02.
 - l. Records of the weight or volume of waste, section 33.1-20-04.1-09.
 - m. The closure plan, sections 33.1-20-04.1-05 and 33.1-20-14-02.
 - n. The postclosure plan, sections 33.1-20-04.1-09 and 33.1-20-14-02.
 - o. The financial assurance instruments for closure and postclosure, chapter 33.1-20-14.
 - p. Records of gas monitoring and remediation, section 33.1-20-06.1-02.
 - q. The annual report, section 33.1-20-04.1-04.
 - r. Notices of intent to close and completion of postclosure, sections 33.1-20-04.1-05 and 33.1-20-04.1-09 respectively.
 - s. The permit and any modifications, sections 33.1-20-02.1-03 and 33.1-20-02.1-06.
3. An owner or operator shall prepare and submit a copy of an annual report to the department by March first of each year. The annual report must cover facility activities during the previous calendar year and must include the following information:
- a. Name and address of the facility;
 - b. Calendar period covered by the report;
 - c. Annual quantity for each category of solid waste in tons or volume;
 - d. Identification of occurrences and conditions that prevented compliance with the permit and this article; and
 - e. Other items identified in the facility plans and permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-04.1-05. General closure standards.

The requirements of this section apply to all solid waste management facilities, unless otherwise specified.

- 1. Each owner or operator shall close their facility in a manner that achieves the following:
 - a. Minimizes the need for further maintenance; and
 - b. Controls, minimizes, or eliminates any escape of solid waste constituents, leachate, fugitive emissions, contaminated runoff, or waste decomposition products.
- 2. Sequential partial closure must be implemented to minimize the working face of a landfill.
- 3. Closure must be implemented within thirty days after receipt of the final volume of waste and must be completed within one hundred eighty days following the beginning of

closure activities, unless otherwise specified and approved under subsection 5. Prior to beginning closure, the owner or operator must notify the department in writing of the intent to close.

4. The owner or operator of a landfill for which closure is completed in part or whole shall enter into the operating record and submit to the department:

a. As-built drawings showing the topography, pertinent design features, extent of waste, and other appropriate information; and

b. Certification by the owner or operator and a professional engineer that closure has been completed in accordance with the approved closure plan and this article.

5. Each owner or operator shall prepare and implement a written closure plan approved by the department as part of the permitting process. The closure plan must:

a. Estimate the largest area ever requiring final cover at any time during the active life of the site;

b. Estimate the maximum inventory of solid waste onsite over the active life of the facility;

c. For landfills, describe the final cover and the methods to install the cover;

d. Project time intervals at which sequential partial closure or closure is to be implemented;

e. Describe the resources and equipment necessary for closure; and

f. Identify closure costs estimates and provide financial assurance mechanisms as required by chapter 33.1-20-14.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-04.1-06. Transfer stations, processing systems, and drop box facilities.

1. Transfer stations and processing systems must be designed, constructed, and operated to meet the following, where applicable:

a. Control access and maintain aesthetics with a combination of fencing, trees, shrubbery, or natural features;

b. Be sturdy and constructed of easily cleanable material;

c. Provide effective control of birds, rodents, insects, and other vermin;

d. Be adequately screened to prevent and control blowing of litter;

e. Provide protection of the tipping floor from wind, rain, or snow;

f. Minimize noise and dust nuisances;

- g. Provide pollution control measures to protect surface water and ground water including runoff and equipment wash down water control measures;
 - h. Provide all-weather access roads and vehicular traffic areas;
 - i. Provide any necessary pollution control measures to protect air quality including odor and dust control and prohibit burning;
 - j. Prohibit scavenging;
 - k. Have communication capabilities to immediately summon fire, police, or emergency personnel in the event of an emergency; and
 - l. Remove all solid waste from the facility at closure to a permitted facility.
2. Drop box facilities must:
- a. Be accessible by all-weather roads;
 - b. Be designed and serviced as often as necessary to ensure adequate capacity. Storage of solid waste outside the detachable containers is prohibited; and
 - c. Remove all remaining solid waste to a permitted facility and remove the drop box from the facility at closure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-04.1-07. Piles used for storage and treatment - Standards.

This section is applicable to solid waste stored or treated in piles, composting, sludge piles, scrap tire piles, garbage which is in place for more than three days, putrescible waste, other than garbage, which is in place for more than three weeks, and other solid waste not intended for recycling which is in place for more than three months.

- 1. Vector control measures must be instituted when necessary to prevent the transmission of disease and otherwise prevent and reduce hazards created by rats, snakes, insects, birds, cats, dogs, skunks, and other animals or vermin.
- 2. An owner and operator of a waste pile, except composting of grass and leaves, shall:
 - a. Comply with the general facility standards of section 33.1-20-04.1-02; and
 - b. Maintain the site including the removal of all solid waste, as necessary, and at closure to a permitted facility, or otherwise manage the waste that is in keeping with the purpose of this article.
- 3. Requirements for waste piles likely to produce a leachate are:
 - a. Waste piles must be underlain by concrete, asphalt, clay, or an artificial liner. The liner must be of sufficient thickness and strength to withstand stresses imposed by waste handling equipment and the pile;

- b. Runoff and run-on control systems must be designed, installed, and maintained to handle a twenty-five-year, twenty-four-hour storm event;
 - c. Based on site and waste characteristics and the proposed operation, the department may require that waste piles have the following:
 - (1) A ground water monitoring system that complies with chapter 33.1-20-13;
 - (2) A leachate collection and treatment system; and
 - (3) Financial assurance; and
 - d. The department may require that the entire base or liner be inspected for wear and integrity and repaired or replaced by removing storage waste or otherwise providing inspection access to the base or liner.
4. An owner or operator of a tire pile shall:
- a. Control access to the tire pile by fencing;
 - b. Limit piles of scrap tires to a maximum basal area of ten thousand square feet [929 square meters] in size, which, along with the fire lane, must be underlain by concrete, asphalt, clay overlain with gravel, or other appropriate material of sufficient thickness, strength, and low permeability to withstand stresses imposed by waste handling equipment, fire control equipment, and to minimize liquid infiltration in case of a fire;
 - c. Limit the height of the tire pile to twenty feet [6.1 meters];
 - d. Provide for a fifty-foot [15.24-meter] fire lane around the tire pile;
 - e. Provide site access by fire control equipment;
 - f. Provide run-on and runoff control systems adequate to control surface water from a twenty-five-year, twenty-four-hour precipitation event; and
 - g. Provide financial assurance adequate to remove stockpiled waste and to remediate environmental contingencies.
5. An owner or operator of a composting facility for grass and leaves shall:
- a. Direct surface water or storm water from composting and waste storage areas;
 - b. Control surface water drainage to prevent leachate runoff;
 - c. Store solid waste separated from compostable material in a manner that controls vectors and aesthetic degradation, and remove this solid waste from the site to an appropriate facility at least weekly;
 - d. Turn the yard waste periodically to aerate the waste, maintain temperatures, and control odors; and
 - e. Prevent the occurrence of sharp objects greater than one inch [2.54 centimeters] in size in finished compost offered for use.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-04.1-08. Treatment and resource recovery facilities.

In addition to sections 33.1-20-04.1-02, 33.1-20-04.1-03, 33.1-20-04.1-04, and 33.1-20-04.1-05, the owner or operator of a facility which conducts treatment or resource recovery other than processing shall comply with these standards.

1. All liquids must be collected and treated to meet the water protection provisions of chapter 33.1-20-13.
2. Surface water must be diverted away from all open storage areas.
3. Solid waste must be confined to storage containers and areas specifically designed to store waste. Waste handling and storage systems must provide sufficient excess capacity to prevent nuisances, environmental impacts, or health hazards in the event of mechanical failure or unusual waste flows.
4. Resource recovery systems or facilities must be operated on first-in, first-out basis. Stored solid waste containing garbage may not be allowed to remain unprocessed for more than forty-eight hours unless adequate provisions are made to control flies, rodents, odors, or other environmental hazards or nuisances.
5. All solid waste, recovered materials, or residues must be controlled and stored in a manner that does not constitute a fire or safety hazard or a sanitary nuisance.
6. All residues from resource recovery systems or facilities must be handled and disposed according to this article.
7. All incinerators used for solid waste must be constructed and operated in compliance with article 33.1-15.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-08, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-04.1-09. General disposal standards.

1. In addition to sections 33.1-20-04.1-02, 33.1-20-04.1-03, 33.1-20-04.1-04, and 33.1-20-04.1-05, the standards of this section apply to all landfills, surface impoundments closed with solid waste in place, and land treatment units, unless otherwise indicated.
2. Construction and operation standards for solid waste management facilities regulated by this section:
 - a. Every solid waste landfill or facility shall have and maintain, or have access to, equipment adequate for the excavation, compaction, covering, surface water management, and monitoring procedures required by approval plans and this article.
 - b. Roads must be constructed and maintained to provide access to the facility. Access roads must be cleaned and decontaminated as necessary.

- c. There must be available an adequate supply of suitable cover material, which, if necessary, must be stockpiled and protected for winter operation.
- d. The final cover of all disposal facilities must be designed and constructed in a manner that ensures the quality and integrity of the hydraulic barrier and the protective vegetative cover.
- e. The working face or open area of a landfill must be limited in size to as small an area as practicable. Sequential partial closure must be implemented as necessary to keep the disposal area as small as practicable and to close filled areas in a timely manner.
- f. All disposal facilities shall identify, quantify, remove, stockpile, and maintain suitable plant growth material for later use in closure.
- g. Any recycling or salvage activity must be authorized by the owner or operator and must be in a separate area in a manner to avoid injury and interference with the landfill operation.
- h. Vehicles, farm machinery, metal appliances, or other similar items brought to the facility for recycling may be stored temporarily in a separate area.
- i. Vector control measures, in addition to the application of cover material, must be instituted whenever necessary to prevent the transmission of disease, prevent bird hazards to aircraft, and otherwise prevent and reduce hazards created by rats, flies, snakes, insects, birds, cats, dogs, and skunks.
- j. All domestic animals must be excluded from the facility. Feeding of garbage to animals is prohibited.
- k. All earthen material must be maintained onsite unless removal from the site is authorized by the department.

3. Construction and operation standards, excluding inert waste landfills.

- a. The landfill must be designed and operated to prevent the run-on and runoff of surface waters resulting from a maximum flow of a twenty-five-year, twenty-four-hour storm.
- b. Facilities receiving on average over twenty tons [18.2 metric tons] per day of solid waste shall make provisions for measuring all waste delivered to and disposed in the facility. Weight measurements are preferable; volume measurements (cubic yards) are acceptable.
- c. Active areas of the landfill must be surveyed periodically to ensure that filling is proceeding in a manner consistent with the landfill design and that closure grades are not exceeded.
- d. All run-on or runoff must be properly controlled to avoid its concentration on or in solid waste and to minimize infiltration into the waste material. Disposal shall avoid any areas within the facility where run-on or runoff accumulates.
- e. Leachate removal systems must be operated and maintained to assure continued function according to the design efficiency. This shall include, where applicable:

- (1) Flushing, inspection and, if necessary, repair of collection lines after placement of the first layer of waste in a landfill cell;
- (2) Annual sampling and analysis of leachate for the parameters required under the ground water quality monitoring required under section 33.1-20-13-02;
- (3) At minimum, semiannual monitoring of leachate head or elevations above the liner;
- (4) Annual flushing of leachate collection lines to remove dirt and scale; and
- (5) Inclusion of leachate removal system operation, inspection, and maintenance procedures in the operating record.

4. Closure standards, excluding land treatment units.

a. Closed solid waste management units may not be used for cultivated crops, heavy grazing, buildings, or any other use which might disturb the protective vegetative and soil cover.

b. All solid waste management units must be closed with a final cover designed to:

- (1) Limit the amount of percolation that may enter the waste to meet the efficiency requirements for that type of solid waste management unit;
- (2) Minimize precipitation run-on from adjacent areas;
- (3) Minimize erosion and optimize drainage of precipitation falling on the landfill. The grade of slopes may not be less than three percent, nor more than fifteen percent, unless the applicant or permittee provides justification to show steeper slopes are stable and will not result in long-term surface soil loss in excess of two tons [1.82 metric tons] per acre per year. In no instance may slopes exceed twenty-five percent; and
- (4) Provide a surface drainage system which does not adversely affect drainage from adjacent lands.

c. The final cover must include six inches [15.2 centimeters] or more of suitable plant growth material which must be seeded with shallow rooted grass or native vegetation.

d. The department may allow, on a case-by-case basis, the use of closed inert waste landfill sites for certain beneficial uses that would not pose a threat to human health or the environment.

5. Postclosure standards for solid waste management facilities regulated by this section.

a. The owner or operator of a landfill or a surface impoundment closed with solid waste in place shall meet the following during the postclosure period:

- (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cover to correct effects of settlement, subsidence, and other events, and preventing run-on and runoff from eroding or otherwise damaging the final cover;

- (2) Maintain and operate the leachate collection system, if applicable;
 - (3) Monitor the ground water and maintain the ground water monitoring system, if applicable; and
 - (4) Operate and maintain the gas control system, if applicable.
- b. The owner or operator of a municipal waste landfill, an industrial waste landfill, a special waste landfill, a surface impoundment closed with solid waste remaining in place, or a land treatment facility shall prepare and implement a written postclosure plan approved by the department as a part of the permitting process. The postclosure plan must address facility maintenance and monitoring activities for a postclosure period of thirty years.
- (1) Postclosure includes appropriate ground water monitoring; surface water monitoring; gas monitoring; and maintenance of the facility, facility structures, and ground water monitoring systems.
 - (2) The postclosure plan must provide the name, address, and telephone number of the person or office to contact during the postclosure period; and project time intervals at which postclosure activities are to be implemented, identify postclosure cost estimates, and provide financial assurance mechanisms as required by chapter 33.1-20-14.
 - (3) The department may require an owner or operator to amend the postclosure plan, including an extension of the postclosure period, and implement the changes. If the permittee demonstrates that the facility is stabilized, the department may authorize the owner or operator to discontinue postclosure activities.
- c. Following completion of the postclosure period, the owner or operator shall notify the department verifying that postclosure management has been completed in accordance with the postclosure plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-04.1-10. Other methods of solid waste management - Standards.

New and unique methods developed subsequent to December 1, 1992, which can be utilized without environmental degradation and creation of hazards to public health and safety will be considered by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-05

[RESERVED]

CHAPTER 33.1-20-05.1 **INERT WASTE LANDFILLS**

Section

<u>33.1-20-05.1-01</u>	<u>Applicability</u>
<u>33.1-20-05.1-02</u>	<u>Performance and Design Criteria</u>
<u>33.1-20-05.1-03</u>	<u>Lime Sludge</u>
<u>33.1-20-05.1-04</u>	<u>Closure Criteria</u>
<u>33.1-20-05.1-05</u>	<u>Postclosure Criteria</u>

33.1-20-05.1-01. Applicability.

An owner or operator of an inert waste landfill, which does not qualify for a permit by rule, shall comply with this chapter and with sections 33.1-20-04.1-02, 33.1-20-04.1-03, 33.1-20-04.1-04, 33.1-20-04.1-05, and 33.1-20-04.1-09. An inert waste landfill, which is permitted by rule, shall comply with section 33.1-20-02.1-02 and with this chapter, but is exempt from sections 33.1-20-04.1-03 and 33.1-20-04.1-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-05.1-02. Performance and design criteria.

The owner or operator of an inert waste landfill shall comply with these design, construction, and operating standards.

1. Access to the facility must be controlled by lockable gates and a combination of fencing, natural barriers, or artificial barriers.
2. Disposal of the following solid waste into inert waste landfills is prohibited: agricultural waste, asbestos waste, municipal waste, commercial waste, industrial waste, special waste, regulated infectious waste, liquid solid waste, hazardous waste, and radioactive waste.
3. All wastes deposited at the site must be spread and periodically compacted to promote drainage of surface water.
4. All wastes must be covered at least two times per year with a minimum of six inches [15.2 centimeters] of suitable earthen material.
 - a. The department may exempt the owner or operator of the landfill from this requirement based on the type and amount of waste received at the landfill and the site location.
 - b. This requirement does not apply to monofills used solely for bottom ash from coal fired boilers.
5. Inert waste permits must be limited to an area no larger than necessary to properly conduct permitted inert waste disposal activities. The department shall take into consideration each applicant's operating needs and conditions when evaluating this requirement in order to best achieve the purposes of this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, § 23

33.1-20-05.1-03. Lime sludge.

Lime sludge from a water treatment plant may be disposed in an inert waste landfill contingent upon departmental approval, which must be based upon factors such as site characteristics, site design, site operation, or permit conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-05.1-04. Closure criteria.

Closure of an existing unit must be completed as outlined in sections 33.1-20-04.1-05 and 33.1-20-04.1-09. All existing units must be covered with two feet [61.0 centimeters] or more of earthen material, the lower twelve inches [30.5 centimeters] of which must be compacted clay-rich earthen material, free from cracks and extrusions of solid waste. If a cover of four feet [1.2 meters] or more of clay-rich earthen material is achieved, compaction is not required. At least six inches [15.2 centimeters] of suitable plant growth material must be placed over the covered landfill and planted with adapted grasses.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-05.1-05. Postclosure criteria.

Owners or operators of inert waste landfills shall conduct annual postclosure inspections for a period of five years after closure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-06

[RESERVED]

CHAPTER 33.1-20-06.1
MUNICIPAL WASTE LANDFILLS

Section

33.1-20-06.1-01 Applicability

33.1-20-06.1-02 Performance and Design Criteria

33.1-20-06.1-03 Closure Criteria

33.1-20-06.1-01. Applicability.

The requirements of this chapter and of sections 33.1-20-01.1-08, 33.1-20-04.1-02, 33.1-20-04.1-03, 33.1-20-04.1-04, 33.1-20-04.1-05, and 33.1-20-04.1-09 apply to owners and operators of municipal waste landfills, except that the department may allow alternate performance and design criteria, as specified in subsections 2 and 3 of section 33.1-20-06.1-02, and it may waive section 33.1-20-04.1-03 for a municipal waste landfill receiving less than twenty tons [18.2 metric tons] per day based upon factors such as the site's climate, hydrogeology, topography, geology, ground water quality and location, and the type of wastes received. In

addition to the requirements of this chapter, municipal solid waste landfills receiving on average more than five hundred tons [455 metric tons] per day shall comply with section 33.1-20-10-03, subsection 2 of section 33.1-20-10-04, and section 33.1-20-10-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-06.1-02. Performance and design criteria.

The owner or operator of a municipal waste landfill facility shall comply with these design, construction, and operating standards.

1. Access to the facility must be controlled by lockable gates and a combination of fencing, natural barriers, or artificial barriers. The gates must be locked when an attendant is on duty.
2. Any new or lateral expansion of a municipal waste landfill must be underlain with a hydraulic barrier and leachate removal system capable of collecting and removing leachate and contaminated surface water within the landfill.
 - a. The liner and leachate removal system must be compatible with the waste and leachate.
 - b. The liner and leachate removal system must maintain its integrity for the life of the facility and the postclosure period.
 - c. The leachate removal system must have a collection efficiency of ninety percent or better and be capable of maintaining a hydraulic head of twelve inches [30.5 centimeters] or less above the liner.
 - d. The liner must consist of one of the following:
 - (1) A natural soil liner constructed of at least four feet [1.2 meters] of natural soil having a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second; or
 - (2) A composite liner consisting of two components; the upper component must consist of a minimum thirty mil flexible membrane liner, and the lower component must consist of at least a two-foot [61.0-centimeter] layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second. Flexible membrane liner components consisting of high density polyethylene must be at least sixty mil thick. The flexible membrane liner component must be installed in direct and uniform contact with the compacted soil component.
 - e. The drainage layer of the leachate removal system must have a hydraulic conductivity of 1×10^{-3} centimeters per second or greater throughout. The drainage layer must have sufficient thickness to provide a transmissivity of 3.0×10^{-2} centimeters squared per second or greater.
 - f. Appropriate measures must be provided as necessary for preparation of the liner subgrade, quality assurance, and quality control testing of the construction of the

liner and leachate removal system, and protection and maintenance of the liner and leachate removal system to ensure the integrity of the system.

g. An alternative liner and leachate removal system for a landfill site may be approved by the department. The department must consider factors such as the proposed system's ability to control leachate migration, the hydrogeologic characteristics of the site and surrounding land, the climate of the area, or the potential leachate quality.

3. The liner and leachate removal system in combination with the final cover must achieve a site efficiency of ninety-five percent or better for rejection or collection of the precipitation that falls on the site.

4. Methane and other gases from waste decomposition may not be allowed to migrate laterally from the landfill so as to endanger structures, environmental resources, or adjacent properties.

a. The concentration of methane gas generated by landfills on the facility must not exceed twenty-five percent of the lower explosive limit for methane in structures or appurtenances on the facility.

b. The concentration of methane gas must not exceed the lower explosive limit for methane at the facility boundary.

c. Monitoring of methane gas must be conducted at least quarterly, on a schedule proposed by the owner or operator and approved by the department, to assure that the standards of subdivisions a and b are met. The frequency of monitoring must consider such factors as the facility site conditions, hydrogeologic conditions surrounding the site, or climate of the area.

d. If methane gas levels exceed the standards of subdivisions a and b, the owner or operator must:

(1) Immediately take action to protect public health;

(2) Notify the department within seven days; and

(3) Implement remedial measures within sixty days.

5. A certified operator must be on duty while the facility is receiving solid waste. Facilities receiving on average over twenty tons [18.2 metric tons] of municipal waste per day shall have an attendant at or near the entrance to the facility to monitor, accept or reject, measure, and record wastes arriving at the facility.

6. Solid waste must be unloaded at the bottom of the working face of the fill. The waste must then be spread in layers and compacted as densely as practicable. Each layer may not exceed a thickness of two feet [61.0 centimeters] of material after compaction is completed.

7. Household pet animal carcasses may be buried along with other municipal household waste. Larger animal carcasses must be disposed of immediately and must be placed at least four feet [1.2 meters] below grade with at least twelve inches [30.5 centimeters] of cover material directly covering the carcass.

8. The following wastes may not be accepted for disposal in municipal waste landfills unless approved by the department:
- a. Hazardous waste, except in amounts normally in municipal waste;
 - b. Industrial waste, if not addressed in the industrial waste management plan and the permit;
 - c. Lead acid batteries;
 - d. Liquids, except in amounts normally in household waste, unless the liquid is leachate or gas condensate derived from the municipal solid waste landfill and the municipal solid waste landfill, whether it is a new or existing landfill or a lateral expansion, is designed with a composite liner and leachate collection system as described in this section;
 - e. Major appliances;
 - f. Municipal waste incinerator ash;
 - g. Other waste, if the department determines that such waste has toxic or adverse characteristics which can impact public health or environmental resources;
 - h. Pesticide containers which are not empty and have not been triple-rinsed, except those normally in municipal waste;
 - i. Polychlorinated biphenyls (PCB) waste as defined in 40 CFR part 761;
 - j. Raw or digested sewage sludges, lime sludges, grit chamber cleanings, animal manure, septic tank pumpings, bar screenings, and other sludges, if not included in the permit;
 - k. Regulated infectious waste, except in amounts normally in household waste;
 - l. Special waste; and
 - m. Used oil.
9. A uniform compacted layer of six inches [15.2 centimeters] or more of suitable earthen material or other departmentally approved material must be placed on all solid waste by the end of each working day. All cover must be free of trash, garbage, or other similar waste.
10. On all areas where final cover or additional solid waste will not be placed within one month, an additional six inches [15.2 centimeters] or more of compacted, clay-rich earthen material or other departmentally approved material must be placed. This intermediate cover may be removed when disposal operations resume.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-08, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-06.1-03. Closure criteria.

In addition to sections 33.1-20-04.1-05 and 33.1-20-04.1-09, at closure, an owner or operator shall cover an existing unit with a layer of compacted soil material having a thickness of eighteen inches [45.7 centimeters] or more and a hydraulic conductivity of 1×10^{-7} centimeters per second or less. The compacted layer must be free from cracks and extrusions of solid waste. A second layer of twelve inches [30.5 centimeters] or more of clay-rich soil material suitable for serving as a plant root zone must be placed over the compacted layer. At least six inches [15.2 centimeters] of suitable plant growth material must be placed over the covered landfill and the facility planted with adapted grasses. The total depth of final cover must be three feet [91.4 centimeters] or more, as required to achieve subsection 3 of section 33.1-20-06.1-02. The requirements of this section may be modified by the department if the permit applicant demonstrates that an alternative design will appropriately limit percolation of liquid into the waste.

1. If the permit applicant wishes to pursue an alternative cover design, one of the following methods shall be used to demonstrate that the alternative cover design will appropriately limit the amount of percolation that may enter the waste:

a. Hydrologic modeling;

b. Lysimetry or instrumentation using a field-scale test section;

c. Comparison of the soil and climatic conditions at the site with the soil and climatic conditions at a site where the department has previously approved the same alternative cover design; or

d. Other method approved by the department.

2. To demonstrate that an alternative cover design will appropriately limit percolation of liquid into the waste, the alternative cover design must be shown to limit the average rate of percolation of liquid into wastes to an equal or lower value than the final cover design described in this section, or to an average long-term percolation rate less than 0.2 inches [5.0 millimeters] per year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-07

[RESERVED]

CHAPTER 33.1-20-07.1

**SMALL VOLUME INDUSTRIAL WASTE LANDFILLS AND SPECIAL WASTE
LANDFILLS**

Section

33.1-20-07.1-01 Performance and Design Criteria

33.1-20-07.1-02 Closure Criteria

33.1-20-07.1-01. Performance and design criteria.

In addition to the requirements of section 33.1-20-01.1-08 and chapter 33.1-20-04.1, the owner or operator of an industrial waste landfill or a special waste landfill shall comply with the design, construction, and operating standards as follows:

1. On all areas of the landfill where final cover or additional solid waste will not be placed within six months, eight inches [20.3 centimeters] or more of compacted clay-rich soil material, similar material, or a synthetic cover must be placed to prevent ponding of surface water, to minimize infiltration of surface water, and to control windblown dust.
2. Solid waste disposal in industrial waste landfills and special waste landfills must be limited to those wastes identified in the permit application or permit. Regulated infectious waste, used oil as a free liquid, and hazardous waste may not be accepted for disposal at the landfill. TENORM waste may only be accepted under the provisions of chapter 33.1-20-11.
3. All solid wastes deposited at the landfill must be spread and compacted as densely as practicable to minimize waste volume and promote drainage of surface water.
4. Any new or lateral expansion of an industrial waste landfill or special waste landfill must be designed with an appropriate hydraulic barrier and leachate management system capable of collecting and removing leachate and contaminated surface water within the disposal unit.
 - a. The liner and leachate removal system must be compatible with the waste and leachate.
 - b. The liner and leachate removal system must maintain its integrity during the operating period and through the postclosure period.
 - c. The system must have a collection efficiency of ninety percent or better and must be capable of maintaining a hydraulic head of twelve inches [30.5 centimeters] or less above the liner.
 - d. For landfills that receive wastes containing water soluble constituents, the liner must consist of at least four feet [1.2 meters] of compacted natural soil having a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second.
 - e. A composite liner is required for landfills receiving TENORM waste or wastes which may contain leachable organic constituents. The liner must consist of at least three feet [91.4 centimeters] of recompacted clay with a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second overlain with at least a sixty mil flexible membrane liner.
 - f. The drainage layer must have a hydraulic conductivity of 1×10^{-3} centimeters per second or greater throughout. The drainage layer must have a sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater.
 - g. The liner and leachate removal system in combination with the final cover must achieve a site efficiency of at least ninety-eight and one-half percent or better for collection or rejection of the precipitation that falls on the site.

- h. The requirements of this subsection for a liner, leachate collection system, or both liner and leachate collection system may be modified by the department if the permit applicant demonstrates that, based on factors such as geology and hydrology of the site, characteristics of the waste, and engineering design, any leachate migration can be prevented or controlled.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03, 23.1-08-09; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-07.1-02. Closure criteria.

In addition to sections 33.1-20-04.1-05 and 33.1-20-04.1-09, at closure, an owner or operator shall cover an existing unit with a layer of compacted soil material having a thickness of eighteen inches [45.7 centimeters] or more, and a saturated hydraulic conductivity of 1×10^{-7} centimeters per second or less. A second layer of twelve inches [30.5 centimeters] or more of clay-rich soil material suitable for serving as a plant root zone must be placed over the compacted layer. At least six inches [15.2 centimeters] of suitable plant growth material must be placed over the covered landfill and the facility planted with adapted grasses. The total depth of final cover must be three feet [91.4 centimeters] or more. The requirements of this section may be modified by the department if the permit applicant demonstrates that an alternative design will appropriately limit percolation of liquid into the waste.

1. If the permit applicant wishes to pursue an alternative cover design, one of the following methods shall be used to demonstrate that the alternative cover design will appropriately limit the amount of percolation that may enter the waste:
 - a. Hydrologic modeling;
 - b. Lysimetry or instrumentation using a field-scale test section;
 - c. Comparison of the soil and climatic conditions of the site with the soil and climatic conditions at a site where the department has previously approved the same alternative cover design; or
 - d. Other method approved by the department.
2. To demonstrate that an alternative cover design will appropriately limit percolation of liquid into the waste, the alternative cover design must be shown to limit the average rate of percolation of liquid into wastes to an equal or lower value than the final cover design described in this section or to an average long-term percolation rate less than 0.2 inches [5.0 millimeters] per year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-08 **[RESERVED]**

CHAPTER 33.1-20-08.1 **SURFACE IMPOUNDMENT PROVISIONS**

Section

33.1-20-08.1-01 Performance and Design Criteria

33.1-20-08.1-02 Closure and Postclosure Criteria

33.1-20-08.1-01. Performance and design criteria.

In addition to the requirements of section 33.1-20-04.1-09, the owner or operator of a surface impoundment shall comply with the following:

1. Applicability.

a. The design, construction, and operating standards of this section are applicable to surface impoundments that store or treat solid waste, sludges containing free liquids, free liquids containing high concentrations of dissolved solids, or liquids derived from processing or handling solid waste.

b. The standards of this section are not applicable to the following units:

(1) Surface impoundments which treat wastewater, the discharge of which is subject to federal, state, or local water pollution discharge permits;

(2) Surface impoundments which handle agricultural waste generated by farming operations;

(3) Lime sludge settling basins;

(4) Basins used to collect and store storm water runoff; and

(5) Oil and gas exploration and production waste regulated under North Dakota Century Code section 38-08-04.

2. The owner or operator must design, construct, and operate each surface impoundment so as to:

a. Comply with the surface water and ground water protection standards of chapter 33.1-20-13;

b. New units must have a compacted soil liner of a minimum four feet [1.22 meters] of 1×10^{-7} centimeters per second or lesser hydraulic conductivity or any combination of soil liner thickness, underlying soil thickness and hydraulic conductivity, or a flexible membrane liner which would control the migration of waste or waste constituents during the active life of the surface impoundment and, for surface impoundments closed with solid waste in place, during the postclosure period;

c. Have dikes designed to maintain their structural integrity under conditions of a leaking liner and capable of withstanding erosion; and

d. Have the freeboard equal to or greater than two feet [61.0 centimeters] to avoid overtopping from wave action or precipitation.

3. Monitoring and inspection.

- a. While a surface impoundment is in operation, it must be inspected by the owner or operator monthly and after storms to detect evidence of any of the following:
 - (1) Deterioration, malfunctions, or improper operation of control systems;
 - (2) Sudden drops in the level of the impoundment's contents; and
 - (3) Severe erosion, seepage, or other signs of deterioration in dikes or other containment devices.
 - b. Prior to placing a surface impoundment into operation or prior to renewed operation after six months or more during which the impoundment was not in service, a professional engineer must certify that the impoundment's dike and liner have structural integrity.
4. Emergency repairs and contingency plans.
- a. When a malfunction occurs in the waste containment system which can cause a release to land or water, a surface impoundment must be removed from service and the owner or operator must take the following actions:
 - (1) Immediately shut down the flow of additional waste into the impoundment;
 - (2) Immediately stop the leak and contain the waste which has been released;
 - (3) Take steps to prevent catastrophic failure;
 - (4) If a leak cannot be stopped, empty the impoundment;
 - (5) Clean up all released waste and any contaminated materials; and
 - (6) Notify the department of the problem within twenty-four hours after detecting the problem.
 - b. As part of the contingency plan, the owner or operator must specify a procedure for complying with the requirements of subdivision a of this subsection.
 - c. No surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:
 - (1) If the impoundment was removed from service as the result of actual or imminent dike failure, the owner or operator must certify the dike's structural integrity; and
 - (2) If the impoundment was removed from service as the result of a sudden drop in the liquid level, the following actions must be taken:
 - (a) For any existing portion of the impoundment without a liner, a liner must be installed; and
 - (b) For any portion of the impoundment that is lined, the liner must be repaired and the owner or operator must certify that the repaired liner meets the design specification approved in the permit.

- d. A surface impoundment, that has been removed from service in accordance with the requirements of this subsection and that is not repaired within six months, must be closed in accordance with the provisions of sections 33.1-20-04.1-05 and 33.1-20-04.1-09.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-08.1-02. Closure and postclosure criteria.

In addition to the requirements of section 33.1-20-04.1-09, at closure, the owner or operator shall complete the following:

1. Remove all standing liquids, waste and waste residues, the liners and leak detection system, and any underlying and surrounding contaminated soil. The site must then be reclaimed by regrading the site, replacing all suitable plant growth material, and properly revegetating the site; and
2. If all impoundment materials are not removed as provided in subsection 1, the owner must treat remaining liquids, residues, and soils by removal of liquids, drying, or other means and then close the impoundment and provide postclosure as provided for an industrial waste landfill under section 33.1-20-01.1-02.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-09 **LAND TREATMENT PROVISIONS**

Section

33.1-20-09-01 Applicability

33.1-20-09-02 Land Treatment Standards

33.1-20-09-01. Applicability.

The standards of this chapter apply to facilities that engage in land treatment of solid waste. These standards do not apply to the following:

1. Facilities utilizing municipal and domestic sludge;
2. Agricultural waste, including animal manure and agricultural residues, resulting from farming operations;
3. Composting grass clippings and leaves; and
4. Inert waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-09-02. Land treatment standards.

1. Owners or operators of land treatment facilities shall meet the location standards of section 33.1-20-04.1-01.
2. Owners or operators of land treatment facilities shall meet the minimum standards for performance of chapter 33.1-20-13, the general facility requirements of section 33.1-20-04.1-02, and the general disposal standards of section 33.1-20-04.1-09.
3. Owners or operators of land treatment facilities shall design these facilities to meet the following requirements:
 - a. Provide waste storage facilities, if appropriate, that meet the requirements of this article;
 - b. Collect and treat all runoff from a twenty-five-year, twenty-four-hour storm, and divert all run-on for the maximum flow of a twenty-five year, twenty-four-hour storm around the active area;
 - c. Avoid standing water on the active area;
 - d. Avoid slopes and other features that will lead to soil and waste erosion, unless contour plowing or other measures are taken to avoid erosion; and
 - e. Control access to the site by fencing or other means.
4. Owners and operators of land treatment facilities shall maintain and operate these facilities in compliance with these following requirements:
 - a. Land treatment of garbage or regulated infectious waste is prohibited;
 - b. Analyze solid waste according to departmentally approved methods;
 - c. Avoid applying waste at rates greater than ten times agronomic rates using the proposed cover crop, or depths greater than would allow for tilling the soil by tracked vehicles;
 - d. Provide tilling of soils during the growing season and after each application of waste to maintain aerobic soil conditions;
 - e. Amend the soil and soil nutrients as necessary to promote efficient biological breakdown of waste materials;
 - f. Avoid applying waste to any active area having standing water; and
 - g. Avoid food chain crops during the active life of the facility and after closure until demonstrated to be safe. Specific approval in writing from the department is required for any land treatment disposal facility that is used to raise food crops after closure.
5. All owners or operators of land treatment facilities shall close these facilities in accordance with section 33.1-20-04.1-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-10
LARGE VOLUME INDUSTRIAL WASTE AND MSW ASH LANDFILLS

Section

- 33.1-20-10-01 Applicability
- 33.1-20-10-02 MSW Ash Treatment
- 33.1-20-10-03 Waste Disposal
- 33.1-20-10-04 Landfill Cover and Closure
- 33.1-20-10-05 Facility Inspector

33.1-20-10-01. Applicability.

The requirements of this chapter apply to the treatment and disposal of solid wastes which meet the criteria of subsections 1 and 3 of section 33.1-20-01.1-11.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-10-02. MSW ash treatment.

The owner or operator must propose treatment of municipal waste (MSW) incinerator ash for department approval.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-10-03. Waste disposal.

In addition to the requirements of section 33.1-20-01.1-08 and chapter 33.1-20-04.1, the owner or operator of a landfill shall comply with the performance and design criteria as follows:

1. Any new or lateral expansion of a landfill must be designed with a hydraulic barrier and leachate management system.
 - a. Synthetic liners, leachate detection systems, and leachate removal systems must be compatible with solid waste disposed and the waste's leachate.
 - b. Leachate removal and management systems must be capable of collecting and removing leachate and contaminated surface water.
 - c. Synthetic liners and leachate removal systems must withstand all physical and chemical stresses during the operating period and through the postclosure period.
 - d. The synthetic liners and leachate removal systems must have a collection efficiency of ninety-seven percent or better of precipitation falling on the fill area before closure and must be capable of removing leachate to limit the hydraulic head above the upper liner, exclusive of collection sumps, to twelve inches [30.5 centimeters] or less within thirty-six hours of a precipitation event.
 - e. A composite liner is required which includes at a minimum from bottom to top:

- (1) At least three feet [91.4 centimeters] of recompacted clay with a hydraulic conductivity not to exceed 1×10^{-7} centimeters per second;
 - (2) A synthetic flexible membrane liner at least sixty mil thick;
 - (3) A secondary drainage layer with a hydraulic conductivity of 1×10^{-3} centimeters per second or greater throughout and with sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater;
 - (4) A synthetic flexible membrane liner at least eighty mil thick; and
 - (5) A drainage layer with a hydraulic conductivity of 1×10^{-3} centimeters per second or greater and with sufficient thickness to provide a transmissivity of 3×10^{-2} centimeters squared per second or greater.
- f. No composite liner may be exposed to freezing more than one winter season. At least three feet of solid waste or other material approved by the department must be placed above the upper drainage layer on all lined areas by December first. No disposal may take place after December first in areas which have not met this requirement without first testing the composite liner's integrity and receiving approval from the department.
2. The facility must include a leachate detection and removal system and an onsite leachate management system or offsite leachate management.
 - a. The amount of leachate collected for onsite or offsite management must be measured and recorded.
 - b. The quality of the leachate must be periodically evaluated on a schedule proposed by the facility owner and approved by the department.
 - c. The department may require the construction of onsite surface impoundments to achieve the equivalent or better design standards of onsite landfills, based on site specific factors such as hydrogeological characteristics, anticipated leachate quality, anticipated static head or expected duration of use.
 - d. The department may require an owner or operator to control wildlife access to onsite surface impoundments based upon leachate quality and site circumstances.
 3. Runoff must be contained, collected, and transferred to an onsite surface impoundment, unless another management method is approved by the department.
 4. Solid waste disposal in landfills must be limited to those wastes identified in the permit application, waste acceptance plan, or permit. Regulated infectious waste, used oil as a free liquid which can be recovered or recycled, and hazardous waste may not be accepted for disposal at the landfill. TENORM waste may only be accepted under the provisions of chapter 33.1-20-11.
 5. All solid wastes deposited at the landfill must be placed, spread, or compacted to minimize or prevent settlement and to promote drainage of surface water. The sequence and direction of below-grade operations must be conducted to prevent surface water from entering the active fill area.

6. On all areas of the landfill where final cover or additional solid waste will not be placed within one month, eight inches [20.3 centimeters] or more of compacted clay-rich soil material, similar material, or a synthetic cover must be placed to prevent ponding of surface water, to minimize infiltration of surface water, and to control windblown dust.
7. The composite liner in combination with the final cover after closure must achieve an efficiency of at least ninety-nine and nine-tenths percent or better for collection or rejection of the precipitation that falls on the landfill.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-10-04. Landfill cover and closure.

1. The owner or operator must place intermittent cover on all exposed solid waste according to the approved operation plan.
 - a. Unless specified otherwise in the operation plan, the solid waste must not be left uncovered for more than forty-eight hours. Cover must be provided by additional waste or with a suitable material proposed by the landfill owner and approved by the department.
 - b. The cover materials used and cover depth must be sufficient to cover the solid waste completely.
2. The final cover at closure must be eight feet [2.74 meters] or more, and meet the requirement of subsection 7 of section 33.1-20-10-03. In addition, the final cover must include, at a minimum from bottom to top:
 - a. A barrier layer consisting of at least twenty-four inches [61.0 centimeters] of compacted earthen materials with a hydraulic conductivity no greater than 1×10^{-7} centimeters per second;
 - b. A synthetic flexible membrane liner which is at least sixty mil thick;
 - c. A drainage layer consisting of at least six inches [15.2 centimeters] with a transmissivity of 3×10^{-2} centimeters squared per second or greater;
 - d. A layer which is at least thirty-six inches [91.4 centimeters] thick to protect the synthetic liner and barrier layer from freezing, the upper twelve inches [30.5 centimeters] of this layer must be suitable as a plant root zone; and
 - e. A top layer at least six inches [15.2 centimeters] thick consisting of suitable plant growth material.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-10-05. Facility inspector.

The owner or operator shall provide the funds necessary to employ an inspector for conducting onsite inspection services at the facility. The owner or operator shall provide funds by

July thirty-first of each year for salary, wages, and operating expenses associated with employing an inspector for the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-06, 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-11
LANDFILL DISPOSAL OF TECHNOLOGICALLY ENHANCED NATURALLY
OCCURRING RADIOACTIVE MATERIAL WASTE

Section

33.1-20-11-01 Radioactive Waste Disposal

33.1-20-11-02 Prohibition

33.1-20-11-03 Authorization

33.1-20-11-04 Monitoring

33.1-20-11-05 Reporting

33.1-20-11-06 Worker Training and Safety

33.1-20-11-07 Record of Notice

33.1-20-11-01. Radioactive waste disposal.

Disposal of radioactive waste subject to regulation under chapter 33.1-10-23, meeting the definition of TENORM, into special waste or industrial waste landfills shall comply with the following requirements and limitations:

1. TENORM waste up to, but not exceeding 50.0 picocuries per gram of radium-226 plus radium-228, may be disposed in a landfill which complies with chapter 33.1-20-07.1 or chapter 33.1-20-10, except that the accumulated amount must not exceed twenty-five thousand tons [22,679.22 metric tons] per year or three thousand tons [2,721.55 metric tons] in any one month unless larger amounts in one month resulting from special cleanup projects are preapproved by the department. Drums or shipping containers of TENORM waste which are not of uniform concentration must not exceed an average concentration of 50.0 picocuries per gram of radium-226 plus radium-228.
2. Equipment contaminated with TENORM which does not exceed a maximum exposure level of one hundred microrentgen per hour, including background radiation, at any accessible location may be disposed in a landfill which complies with chapter 33.1-20-07.1 or chapter 33.1-20-10.
3. TENORM waste must be covered by at least one foot of non-TENORM waste or daily cover material by the end of each operating day. For landfills that operate continuously (twenty-four hours per day), all TENORM waste shall be covered at least once every twenty-four hour period.
4. TENORM waste must be disposed at depth greater than ten feet below the surface of the final landfill cover.
5. For a landfill that is subject to chapter 33.1-20-07.1, if any part of the final cover has slope greater than fifteen percent, then the final cover must have an additional two feet of low permeability soil, for a total minimum cover thickness of five feet.

History: Effective January 1, 2016.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-02. Prohibition.

Disposal of TENORM waste subject to regulation under article 33.1-10 is prohibited in all municipal solid waste landfills and inert landfills. Disposal of radioactive waste subject to regulation under article 33.1-10, which does not meet the definition of TENORM, or TENORM waste that is greater than 50.0 picocuries per gram of radium-226 plus radium-228 is prohibited in all landfills. If prohibited TENORM waste is delivered to a landfill for disposal, the waste must be rejected. The owner or operator of the landfill shall note the source, amount, generator, and other identifying information about the rejected waste and shall notify the department within five days of the rejection of such material.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-03. Authorization.

Approval for acceptance of TENORM waste by a landfill not previously authorized to accept such waste in its permit shall follow procedures in section 33.1-20-02.1-06. The facility is also subject to applicable approval and licensure requirements of chapter 33.1-10-23.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-04. Monitoring.

The leachate collection system and groundwater monitoring network shall be analyzed for background concentration of radionuclide parameters prior to receipt of any TENORM waste. Leachate shall be analyzed for radionuclides at the same frequency as groundwater samples are collected. If radionuclides are detected in the leachate at a concentration greater than the concentrations listed below, then the groundwater monitoring network must begin analysis for radionuclide parameters.

Radon: 4,000 picocuries per liter (pCi/L).

Combined radium-226 and radium-228: 5 pCi/L.

Alpha particle activity (including radium-226, excluding radon and uranium): 15 pCi/L.

Uranium: 30 micrograms per liter (ug/L).

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-05. Reporting.

Landfills approved for the disposal of TENORM waste shall file with the department a quarterly summary report stating the date, type, and total quantity by weight in tons, generator,

and final disposal facility of each TENORM transferred. Each report shall be filed within thirty days of the end of each quarter. If no transfers of TENORM have been made during the reporting period, the report must so indicate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-06. Worker training and safety.

Landfills approved for the disposal of TENORM waste shall implement a worker training program and safety program to meet the requirements of section 33.1-10-23-27, so that protection of workers complies with radiation protection standards of chapters 33.1-10-04.2 and 33.1-10-10.1. The training and safety program shall be approved by the department prior to receipt of any TENORM waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

33.1-20-11-07. Record of notice.

The records of notice required by section 33.1-20-02.1-04 shall specify that the landfill is approved to accept TENORM waste. The final record of notice shall indicate the total quantity of TENORM waste disposed in the landfill.

History: Effective _____, 2018.

General Authority: NDCC 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-03-03, 23.1-03-04, 23.1-08-03; S.L. 2017, ch. 199, §§ 18, 23

CHAPTER 33.1-20-12 **REGULATED INFECTIOUS WASTE**

Section

33.1-20-12-01 Definitions

33.1-20-12-02 Management Standards

33.1-20-12-01. Definitions.

1. As used in this article, "regulated infectious waste" means an infectious waste which is listed in subdivisions a through g of this subsection. Ash from incineration and residues from disinfection processes are not infectious waste once the incineration or the disinfection has been completed.

a. Cultures and stocks. Cultures and stocks of infectious agents and associated biologicals, including cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

b. Pathological waste. Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.

- c. Human blood and blood products. Liquid waste human blood; products of blood; items saturated or dripping with human blood; or items that were saturated or dripping with human blood that are now caked with dried human blood (including serum, plasma, and other blood components, and their containers).
 - d. Sharps. Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.
 - e. Animal waste. Contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biological, or testing of pharmaceuticals.
 - f. Isolation waste. Biological waste and discarded materials contaminated with blood, excretion, exudates, or secretions from humans who are isolated to protect others from highly communicable diseases, or isolated animals known to be infected with highly communicable diseases.
 - g. Unused sharps. Unused, discarded sharps, hypodermic needles, suture needles, and scalpel blades.
2. As used in this chapter, "disinfection or disinfect" means to remove, inactivate, or destroy blood borne pathogens on a surface or item to the point where the surface or item is no longer capable of transmitting infectious particles.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-12-02. Management standards.

In addition to sections 33.1-20-01.1-04, 33.1-20-01.1-05, 33.1-20-02.1-01, and 33.1-20-04.1-08, every person who collects, stores, transports, treats, or disposes of regulated infectious waste shall comply with these standards of performance.

- 1. At the point of origin, regulated infectious waste must be separated from other wastes and placed in distinctive containers which do not leak and which are impervious, puncture resistant, and tear resistant and which contain obvious markings (for example, red or orange plastic bags or the biohazard label). Bags and containers holding regulated infectious waste must be tied, closed, or sealed securely to prevent leakage.
- 2. At the point of origin, sharps must be:
 - a. Separated from other regulated infectious waste, disinfected onsite, rendered nonsharp onsite, and then disposed; or
 - b. Placed in rigid and puncture-resistant biohazard containers and handled as required by subsection 5.

3. The handling and storage of regulated infectious waste, before the treatment of subsection 5, must be conducted in a manner which minimizes exposure to employees of the waste generator, the waste transporter, and the public.
4. Recycled containers or devices such as carts used for the handling of wastes must be disinfected after each use.
5. All regulated infectious waste must be incinerated or disinfected and sharps that are not incinerated must be rendered nonsharp before disposal. Incineration and disinfection equipment and facilities shall meet the requirements of article 33.1-15 and this article.
6. Blood and blood products can be discarded without incineration or disinfection through municipal sewage disposal systems that meet the requirements of article 33.1-16.
7. The disposal of nonviable human fetuses shall meet the requirements of section 33.1-03-02-05.
8. An infectious waste which is not regulated by this chapter may be disposed at a permitted municipal waste landfill.
9. Household waste containing regulated infectious waste in amounts normally found in household waste may be disposed of at a permitted municipal waste landfill.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-13 **WATER PROTECTION PROVISIONS**

Section

33.1-20-13-01 Site Characterization

33.1-20-13-02 Ground Water Quality Monitoring

33.1-20-13-03 Water Quality Standards

33.1-20-13-04 Monitoring Well Construction

33.1-20-13-05 Assessment Monitoring, Remedial Measures, and Corrective Action

33.1-20-13-01. Site characterization.

The department shall require adequate site characterization to ensure that the waters of the state are not or will not be adversely impacted by the solid waste management facility. At a minimum, the site characterization must address the following:

1. Location and water quality of lakes, rivers, streams, springs, or wetlands within one mile [1.61 kilometers] of the site boundary based on available data;
2. Domestic and livestock wells within one mile [1.61 kilometers] of the site boundary. Information collected should include the location, water quality, depth to water, well depth, screened intervals, yields, and the aquifers tapped;
3. Site location in relation to the one hundred-year floodplain;
4. Depth to the thicknesses of the uppermost aquifers;

5. Hydrologic properties of the uppermost aquifers beneath the proposed facility including existing water quality, flow directions, flow rates, porosity, coefficient of storage, hydraulic conductivity, and potentiometric surface or water table; and
6. An evaluation of the potential for impacts to surface and ground water quality from the proposed facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-13; S.L. 2017, ch. 199, § 23

33.1-20-13-02. Ground water quality monitoring.

1. An owner or operator of a resource recovery unit, a land treatment unit, a surface impoundment, or a landfill, except an inert waste landfill, must incorporate a ground water monitoring system into the design of the facility. If the owner or operator demonstrates to the department that there is no potential for migration of solid waste constituents to the uppermost aquifer during the life of the solid waste management unit and the postclosure period, the department may suspend this requirement. The demonstration must be based upon factors such as the site characterization, the solid waste characteristics and constituents, the potential capacity of the unit or facility, and the physical, chemical, and biological processes affecting contaminant fate and transport.
2. Ground water monitoring systems must be designed to effectively detect the migration of contamination. At a minimum, a water quality monitoring system shall:
 - a. Include one ground water monitoring well located upgradient of the solid waste management unit, and at least two wells located downgradient of the unit. The monitoring wells should be installed at appropriate locations and depths to yield ground water from the uppermost aquifer and all hydraulically connected aquifers below the solid waste management units on the facility;
 - b. Represent the elevation of ground water in each well immediately prior to purging so that the owner or operator may determine the rate and direction of ground water flow each time ground water is sampled;
 - c. Represent the quality of ground water that has not been affected by spills or leakage from solid waste management units;
 - d. Represent the quality of ground water to ensure detection of contamination passing the compliance boundary;
 - e. Ground water samples at municipal waste landfills must not be filtered prior to analysis; and
 - f. The frequency and number of samples collected must be consistent with statistical procedures for evaluating ground water data. A minimum of four independent samples from each well must be collected for analysis during the first sampling event for establishing background data at upgradient (subdivision c) and downgradient (subdivision d) wells, unless four or more sampling events occur prior to acceptance of solid waste by the facility. The monitoring frequency must be semiannual during the active life of the facility and during the postclosure period.

The department may specify an alternate frequency for sampling based upon such factors as site hydrogeological characteristics, solid waste characteristics, evidence of a spill or leakage, or resource value of the aquifer.

3. Additional wells may be required in complicated hydrogeological settings or to define the extent of contamination detected.

4. A written ground water monitoring plan must be developed for approval by the department and implemented as part of the permitting process. The plan must include:

a. Number and location of wells;

b. Procedures for decontamination of drilling and sampling equipment;

c. Procedures for sample collection;

d. Sample analytical procedures;

e. Chain of custody control;

f. Parameters for analysis;

g. Quality assurance or quality control procedures;

h. A monitoring schedule;

i. Data statistical methods and analysis procedures; and

j. Reporting of a statistically significant increase over a background value or of an exceedance of a maximum concentration limit or a water quality standard.

5. Ground water monitoring data obtained under this section must be analyzed within a reasonable period of time after completing sampling and laboratory analysis to determine whether or not a statistically significant increase over background values or an exceedance of a maximum concentration limit or water quality standard has occurred for each parameter required in the monitoring plan or permit. Statistical methods must, as appropriate:

a. Be appropriate for the distribution of the data and, if inappropriate for a normal theory test, be transformed or a distribution-free theory test must be used.

b. Control or correct for seasonal and spatial variability in the data.

c. Account for data below the limit of detection that can be reliably achieved by routine laboratory techniques, using the limit as the lowest concentration level for a chemical parameter which is below detection.

d. Be protective of human health and environmental resources.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 23.1-11-05, 23.1-11-11, 61-28-04, 61-28-05; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-11-05, 23.1-11-06, 23.1-11-08, 23.1-11-11, 61-28-04; S.L. 2017, ch. 199, §§ 23, 26

33.1-20-13-03. Water quality standards.

1. All solid waste management systems, operations, units, and facilities must be designed, constructed, operated, maintained, closed, and maintained after closure so as to be in compliance with North Dakota Century Code chapter 61-28, and water quality standards defined in articles 33.1-16 and 33.1-17. Compliance with these standards is enforceable at the compliance boundary of the facility.
2. Whenever ground water monitoring is required, the department must specify in the facility permit the specific elements of ground water monitoring, including indicator parameters which are constituents in or derived from solid waste, the maximum concentration limits in ground water for each parameter not otherwise defined by subsection 1, and the compliance boundary, considering:

 - a. The physical and chemical characteristics of the waste, including the potential for migration in surface water, in the unsaturated zone beneath the facility, and in ground water;
 - b. The hydrogeological characteristics of the site and the surrounding land;
 - c. The existing quality and quantity of ground water, other possible sources of contamination, and the direction of ground water flow;
 - d. The detectability of the indicator parameters or constituents in surface water or in ground water; or
 - e. The proximity of the facility to surface waters; and
 - f. Appropriate parameters from the list in table 1.
3. The compliance boundary shall be located on land owned by the owner of the facility and no more than five hundred feet [152.4 meters] from a landfill or landfill disposal cell.

TABLE 1 List of Parameters for Assessing Ground Water Quality

a. Parameters measured in the field:

- (1) Appearance (including color, foaming, and odor)
- (2) pH¹
- (3) Specific conductance²
- (4) Temperature
- (5) Water elevation³

b. General geochemical parameters:

- | | |
|-----------------------------|-------------------------------------|
| <u>(1) Ammonia nitrogen</u> | <u>(11) Chloride</u> |
| <u>(2) Total hardness</u> | <u>(12) Fluoride</u> |
| <u>(3) Iron</u> | <u>(13) Nitrate + Nitrite, as N</u> |
| <u>(4) Calcium</u> | <u>(14) Total phosphorus</u> |
| <u>(5) Magnesium</u> | <u>(15) Sulfate</u> |
| <u>(6) Manganese</u> | <u>(16) Sodium</u> |
| <u>(7) Potassium</u> | <u>(17) Total dissolved solids</u> |
| <u>(TDS)</u> | |
| <u>(8) Total alkalinity</u> | <u>(18) Total suspended solids</u> |
| <u>(TSS)</u> | |
| <u>(9) Bicarbonate</u> | <u>(19) Cation/anion balance</u> |
| <u>(10) Carbonate</u> | |

c. Heavy metals:

- | <u>Group A:</u> | <u>Group B:</u> |
|---------------------|-----------------------|
| <u>(1) Arsenic</u> | <u>(9) Antimony</u> |
| <u>(2) Barium</u> | <u>(10) Beryllium</u> |
| <u>(3) Cadmium</u> | <u>(11) Cobalt</u> |
| <u>(4) Chromium</u> | <u>(12) Copper</u> |
| <u>(5) Lead</u> | <u>(13) Nickel</u> |
| <u>(6) Mercury</u> | <u>(14) Thallium</u> |
| <u>(7) Selenium</u> | <u>(15) Vanadium</u> |
| <u>(8) Silver</u> | <u>(16) Zinc</u> |

d. Total organic carbon (TOC)
Chemical oxygen demand (COD)

e. Naturally occurring radionuclides:

- (1) Radon
- (2) Radium
- (3) Uranium

f. Volatile organic compounds, both halogenated and nonhalogenated:

Halogenated:

- | | |
|----------------------|-----------------------------|
| <u>Acrylonitrile</u> | <u>1,1-Dichloroethylene</u> |
|----------------------|-----------------------------|

Allyl chloride	1,2-Dichloropropane
Bromochloromethane	cis-1,3-Dichloropropene
Bromodichloromethane	cis-1,2-Dichloroethylene
Bromoform	trans-1,2-Dichloroethylene
Bromomethane	trans-1,3-Dichloropropene
Carbon disulfide	trans-1,4-Dichloro-2-butene
Carbon tetrachloride	Dichlorofluoromethane
Chlorobenzene	Dichloromethane (methylene chloride)
(monochlorobenzene)	1,3-Dichloropropene
Chlorodibromomethane	2,3-Dichloro-1-propene
Chloroethane	Pentachloroethane
Chloroform	1,1,1,2-Tetrachloroethane
Chloromethane	1,1,2,2-Tetrachloroethane
Dibromomethane	Tetrachloroethylene
1,2-Dibromo-3-chloropropane	1,1,1-Trichloroethane
1,2-Dibromoethane	1,1,2-Trichloroethane
Dichloroacetonitrile	Trichloroethylene
1,2-Dichlorobenzene	Trichlorofluoromethane
1,3-Dichlorobenzene	1,2,3-Trichloropropane
1,4-Dichlorobenzene	1,1,2-Trichlorotrifluoroethane
Dichlorodifluoromethane	Vinyl acetate
1,1-Dichloroethane	Vinyl chloride
1,2-Dichloroethane	

Nonhalogenated:

Acetone	Methyl isobutyl ketone
Benzene	Pyrene
Cumene	Styrene
Ethylbenzene	Tetrahydrofuran
Ethyl ether	Toluene
Methyl butyl ketone	m-Xylene
Methyl ethyl ketone	o-Xylene
Methyl iodide	p-Xylene

g. Pesticides:

Aldrin	Endrin
Chlordane	Heptachlor
Chloroform	Lindane
4,4 DDT	Methyl bromide
Dibenzofuran	Methyl Methacrylate
Dieldrin	Methylene bromide
Dimethoate	Naphthalene
Endosulfan	Parathion

¹ Two measurements: in field, and immediately upon sample's arrival in laboratory.

² As measured in field.

³ As measured to the nearest 0.01 foot in field before pumping or bailing.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 23.1-11-05, 23.1-11-11, 61-28-04, 61-28-05; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-11-05, 23.1-11-06, 23.1-11-08, 23.1-11-11, 61-28-04; S.L. 2017, ch. 199, §§ 23, 26

33.1-20-13-04. Monitoring well construction.

1. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must allow collection of representative ground water samples. Wells must be constructed in such a manner as to prevent contamination of the samples, the sampled strata, and between aquifers and water bearing strata.
2. All soil borings or ground water monitoring wells must be completed by a driller licensed in North Dakota and must meet design and construction requirements as stipulated in North Dakota Century Code chapter 43-35 and article 33.1-18.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 43-35-19, 43-35-19.1, 43-35-19.2; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 43-35-19, 43-35-19.1, 43-35-19.2; S.L. 2017, ch. 199, §§ 23, 45, 46, 47

33.1-20-13-05. Assessment monitoring, remedial measures, and corrective action.

1. Within ninety days of finding that a parameter has been detected at a statistically significant level exceeding the ground water standards established under sections 33.1-20-13-02 and 33.1-20-13-03, the owner or operator shall initiate an assessment of remedial measures. The assessment must:
 - a. Be completed within a reasonable time period, unless otherwise specified by permit or the department;
 - b. Include an evaluation of the nature and extent of the release of the constituents including pathways to human and environmental receptors;
 - c. For municipal landfills, include ground water sampling and analysis for all parameters listed in appendix 1 of this chapter. The department may delete any of the appendix 1 parameters if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste within the leaking facility;
 - d. Include an analysis of the effectiveness of potential remedial measures in meeting all requirements of subsection 2 and include the following:
 - (1) The performance, reliability, ease of implementation, and potential impacts of each potential remedial measure;
 - (2) The time required to begin and complete each potential remedial measure;

- (3) The costs of implementation of each potential remedial measure; and
- (4) The permit requirements or other environmental or public health requirements that may substantially affect implementation of each potential remedial measure; and
- e. When requested by the department, the owner or operator must discuss results of the assessment of remedial measures, prior to selection of a corrective action remedy, in a public meeting with interested and affected persons.
- 2. Based on the results of the assessment of remedial measures conducted under subsection 1, the owner or operator must select a corrective action remedy within thirty days which, at minimum, meets the following standards:
 - a. Is protective of human health and environmental resources;
 - b. Attains the ground water protection standards under sections 33.1-20-13-02 and 33.1-20-13-03;
 - c. Controls the sources of release so as to reduce or eliminate, to the maximum extent practicable, further releases of constituents that may pose a threat to human health or environmental resources; and
 - d. Complies with this article and other applicable environmental statutes and rules.
- 3. When selecting a corrective action remedy under subsection 2, the owner or operator shall consider these factors:
 - a. The short-term and long-term effectiveness of the potential remedial measure considering:
 - (1) Magnitude of reducing exposure to constituents;
 - (2) Likelihood of further releases;
 - (3) Practical capability of technologies; and
 - (4) Time until the standards are achieved.
 - b. The ease or difficulty of implementing the potential remedial measure considering:
 - (1) Availability of equipment and specialists;
 - (2) Long-term management needs such as monitoring, operation, and maintenance; and
 - (3) Need to coordinate with and obtain necessary approvals or permits from other agencies.
 - c. The need for interim measures to control the sources of the release and to protect human health and environmental resources.
 - d. The schedules for initiating, conducting, and completing the potential remedial measure.

e. Practical capability of the owner or operator.

4. The owner or operator shall provide the department with a document fully describing the remedial measures assessment under subsection 1 and the selected corrective action remedy under subsections 2 and 3.

5. Upon selection of the corrective action remedy under subsection 2 and with the concurrence of the department, the owner or operator shall establish and implement the remedy.

a. During implementation, the owner or operator shall monitor the effectiveness of the remedy.

b. Implementation shall be considered complete when all actions and standards required to complete the remedy have been satisfied and approved by the department.

c. Upon completion of a corrective action remedy, the owner or operator shall place in the operating record a certification that the corrective action remedy has been completed. Within fourteen days of completion of the certification, the owner or operator shall notify the department that the certification has been placed in the operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 23.1-11-11, 61-28-04, 61-28-05; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-11-02, 23.1-11-06, 23.1-11-08, 61-28-04; S.L. 2017, ch. 199, §§ 23, 26

Appendix I to Section 33.1-20-13-05 - List of Hazardous
Inorganic and Organic Constituents

<u>Acenaphthene</u>	<u>p-Chloroaniline</u>
<u>Acenaphtylene</u>	<u>Chlorobenzene</u>
<u>Acetone</u>	<u>Chlorobenzilate</u>
<u>Acetonitrile; Methyl cyanide</u>	<u>p-Chloro-m-cresol; 4-Chloro-3-</u>
<u>Acetophenone</u>	<u>methylphenol</u>
<u>2-Acetylaminofluorene; 2-AAF</u>	<u>Chloroethane; Ethyl chloride</u>
<u>Acrolein</u>	<u>Chloroform; Trichloromethane</u>
<u>Acrylonitrile</u>	<u>2-Chloronaphthalene</u>
<u>Aldrin</u>	<u>2-Chlorophenol</u>
<u>Allyl chloride</u>	<u>4-Chlorophenyl phenyl ether</u>
<u>4-Aminobiphenyl</u>	<u>Chloroprene</u>
<u>Anthracene</u>	<u>Chromium</u>
<u>Antimony</u>	<u>Chrysene</u>
<u>Arsenic</u>	<u>Cobalt</u>
<u>Barium</u>	<u>Copper</u>
<u>Benzene</u>	<u>m-Cresol; 3-methylphenol</u>
<u>Benzol[a]anthracene; Benzanthracene</u>	<u>o-Cresol; 2-Methylphenol</u>
<u>Benzo[b]fluoranthene</u>	<u>p-Cresol; 4-Methylphenol</u>
<u>Benzo[k]fluoranthene</u>	<u>Cyanide</u>
<u>Benzo[ghi]perylene</u>	<u>2,4-D; 2,4-Dichlorophenoxyacetic</u>
<u>Benzo[a]pyrene</u>	<u>acid</u>
<u>Benzyl alcohol</u>	<u>4,4¹-DDD</u>
<u>Beryllium</u>	<u>4,4¹-DDE</u>
<u>alpha-BHC</u>	<u>4,4¹-DDT</u>
<u>beta-BHC</u>	<u>Diallate</u>
<u>delta-BHC</u>	<u>Dibenz[a,h]anthracene</u>
<u>gamma-BHC; Lindane</u>	<u>Dibenzofuran</u>
<u>Bis(2-chloroethoxy)methane</u>	<u>Dibromochloromethane;</u>
<u>Bis(2-chloroethyl) ether;</u>	<u>Chlorodibromomethane</u>
<u>Dichloroethyl ether</u>	<u>1,2-Dibromo-3-chloropropane; DBCP</u>
<u>Bis-(2-chloro-1-methylethyl) ether;</u>	<u>1,2-Dibromoethane; Ethylene</u>
<u>2,2¹-Dichlorodiisopropyl</u>	<u>dibromide; EDB</u>
<u>ether; DCIP</u>	<u>Di-n-butyl phthalate</u>
<u>Bis-(2-ethylhexyl) phthalate</u>	<u>o-Dichlorobenzene;</u>
<u>Bromochloromethane; Chloro-</u>	<u>1,2-Dichlorobenzene</u>
<u>bromomethane</u>	<u>m-Dichlorobenzene;</u>
<u>Bromodichloromethane;</u>	<u>1,3-Dichlorobenzene</u>
<u>Dibromochloromethane</u>	<u>p-Dichlorobenzene;</u>
<u>Bromoform; Tribromomethane</u>	<u>1,4-Dichlorobenzene</u>
<u>4-Bromophenyl phenyl ether</u>	<u>3,3¹-Dichlorobenzidine</u>
<u>Butyl benzyl phthalate; Benzyl</u>	<u>trans-1,4-Dichloro-2-butene</u>
<u>butyl phthalate</u>	<u>Dichlorodifluoromethane; CFC 12</u>
<u>Cadmium</u>	<u>1,1-Dichloroethane; Ethyldidene</u>
<u>Carbon disulfide</u>	<u>chloride</u>
<u>Carbon tetrachloride</u>	<u>1,2-Dichloroethane; Ethylene</u>
<u>Chlordane</u>	<u>dichloride</u>
<u>1,1-Dichloroethylene; 1,1-Dichloro-</u>	<u>Hexachlorocyclopentadiene</u>
<u>ethene; Vinylidene chloride</u>	<u>Hexachloroethane</u>
<u>cis-1,2-Dichloroethylene; cis-1,2-</u>	<u>Hexachloropropene</u>

Dichloroethene	2-Hexanone; Methyl butyl ketone
trans-1,2-Dichloroethylene	trans-1,2-Indeno(1,2,3-cd)pyrene
Dichloroethene	Isobutyl alcohol
2,4-Dichlorophenol	Isodrin
2,6-Dichlorophenol	Isophorone
1,2-Dichloropropane; Propylene dichloride	Isosafrole
1,3-Dichloropropane; Trimethylene dichloride	Kepone
1,3-Dichloropropane; Trimethylene dichloride	Lead
2,2-Dichloropropane; Isopropylidene chloride	Mercury
1,1-Dichloropropene	Methacrylonitrile
cis-1,3-Dichloropropene	Methapyrilene
trans-1,3-Dichloropropene	Methoxychlor
Dieldrin	Methyl bromide; Bromomethane
Diethyl phthalate	Methyl chloride; Chloromethane
2-Butanone	3-Methylcholanthrene
0,0-Diethyl 0-2-pyrazinyl phosphorothioate; Thionazin	Methyl ethyl ketone; MEK;
Dimethoate	Methyl iodide; Iodomethane
p-(Dimethylamino)azobenzene	Methyl methacrylate
7,12-Dimethylbenz[a]anthracene methyl	Methyl methanesulfonate
3,3 ¹ -Dimethylbenzidine	2-Methylnaphthalene
2,4-Dimethylphenol; m-Xylenol	Methyl parathion; Parathion
Dimethyl phthalate	4-Methyl-2-pentanone; Methyl isobutyl ketone
Dibromomethane	Methylene bromide;
m-Dinitrobenzene	Methylene chloride;
Dichloromethane	Naphthalene
4,6-Dinitro-o-cresol methylphenol	1,4-Naphthoquinone
2,4-Dinitrophenol	1-Naphthylamine
2,4-Dinitrotoluene	2-Naphthylamine
2,6-Dinitrotoluene	Nickel
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	o-Nitroaniline; 2-Nitroaniline
Di-n-octyl phthalate	m-Nitroaniline; 3-Nitroaniline
Diphenylamine	p-nitroaniline; 4-Nitroaniline
Disulfoton	Nitrobenzene
Endosulfan I	o-Nitrophenol; 2-Nitrophenol
Endosulfan II	p-Nitrophenol; 4-Nitrophenol
Endosulfan sulfate	N-Nitrosodi-n-butylamine
Endrin	N-Nitrosodiethylamine
Endrin aldehyde	N-Nitrosodimethylamine
Ethylbenzene	N-Nitrosodiphenylamine
N-Nitroso-	N-Nitrosodipropylamine;
Ethyl methacrylate	N-dipropylamine; Di-n-propylnitrosamine
Ethyl methanesulfonate	N-dipropylamine; Di-n-propylnitrosamine
Famphur	N-Nitrosomethylethylamine
Fluoranthene	N-Nitrosopiperidine
Fluorene	N-Nitrosopyrrolidine
Heptachlor	5-Nitro-o-toluidine

<u>Heptachlor epoxide</u>	<u>Parathion</u>
<u>Hexachlorobenzene</u>	<u>Pentachlorobenzene</u>
<u>Hexachlorobutadiene</u>	
<u>Pentachloronitrobenzene</u>	<u>2,3,4,6-Tetrachlorophenol</u>
<u>Pentachlorophenol</u>	<u>Thallium</u>
<u>Phenacetin</u>	<u>Tin</u>
<u>Phenanthrene</u>	<u>Toluene</u>
<u>Phenol</u>	<u>o-Toluidine</u>
<u>p-Phenylenediamine</u>	<u>Toxaphene</u>
<u>Phorate</u>	<u>1,2,4-Trichlorobenzene</u>
<u>Polychlorinated biphenyls;</u>	<u>1,1,1-Trichloroethane;</u>
<u>PCBs; Aroclors</u>	<u>Methylchloroform</u>
<u>Pronamide</u>	<u>1,1,2-Trichloroethane</u>
<u>Propionitrile; Ethyl cyanide</u>	<u>Trichloroethylene;</u>
<u>Trichloroethene</u>	
<u>Pyrene</u>	<u>Trichlorofluoromethane; CFC-11</u>
<u>Safrole</u>	<u>2,4,5-Trichlorophenol</u>
<u>Selenium</u>	<u>2,4,6-Trichlorophenol</u>
<u>Silver</u>	<u>1,2,3-Trichloropropane</u>
<u>Silvex; 2,4,5-TP</u>	<u>0,0,0-Triethyl phosphorothioate</u>
<u>Styrene</u>	<u>sym-Trinitrobenzene</u>
<u>Sulfide</u>	<u>Vanadium</u>
<u>2,4,5-T; 2,4,5-Trichlorophen-</u>	<u>Vinyl acetate</u>
<u>oxyacetic acid</u>	<u>Vinyl chloride; Chloroethene</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>Xylene (total)</u>
<u>1,1,1,2-Tetrachloroethane</u>	<u>Zinc</u>
<u>1,1,2,2-Tetrachloroethane</u>	
<u>Tetrachloroethylene; Tetrachloroethene;</u>	
<u>Perchloroethylene</u>	

History: Effective _____, 2018.

CHAPTER 33.1-20-14 **FINANCIAL ASSURANCE REQUIREMENTS**

Section

- 33.1-20-14-01 Financial Assurance for Solid Waste Disposal Facilities
- 33.1-20-14-02 Cost Estimates for Closure and Postclosure
- 33.1-20-14-03 Financial Assurance Mechanism for Closure and Postclosure
- 33.1-20-14-04 Implementation of Financial Assurance for Closure and Postclosure
- 33.1-20-14-05 Financial Assurance for Corrective Action
- 33.1-20-14-06 Liability Requirements for Industrial Waste Landfills
- 33.1-20-14-07 Specific Requirements of Mechanisms for Financial Assurance

33.1-20-14-01. Financial assurance for solid waste disposal facilities.

1. The requirements of this chapter apply to all new and expanded solid waste disposal facilities and to existing solid waste disposal facilities that have not been closed by April 9, 1994. These requirements do not apply to inert waste landfills.
2. New or expanded facilities must demonstrate financial assurance prior to acceptance of solid waste and existing facilities by the date given in subsection 1.

3. Owners of facilities may set up one mechanism to demonstrate financial assurance for both closure and postclosure care of each facility. The amount of funds available through the mechanisms must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of postclosure care.
4. Mechanisms used to demonstrate financial assurance under this chapter must ensure that the amount of funds assured is adequate to cover the costs of closure and postclosure care and that the funds will be available in a timely fashion whenever needed, until released from the financial assurance requirement by the department.
5. Mechanisms must be legally valid and binding under North Dakota law.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-02. Cost estimates for closure and postclosure.

1. Each owner or operator shall prepare separate written closure and postclosure estimates of the costs of hiring a third party to complete identified activities of the facility closure and postclosure plans.
 - a. The initial cost estimates must be in current dollars, and cost estimates must be adjusted annually for inflation.
 - b. The cost estimate for closure must equal the cost of closing the largest area requiring a final cover during the active life of the facility.
 - c. The owner or operator must increase the cost estimates if changes in the closure plan or postclosure plan increase the maximum costs of closure or postclosure care, respectively. The owner or operator may reduce a cost estimate for closure if it exceeds the maximum costs of closure during the remaining life of the facility or a cost estimate for postclosure care if it exceeds the maximum costs of postclosure during the remaining postclosure period.
 - d. The cost estimate for postclosure must account for the total costs of postclosure care over the entire postclosure period, including the most expensive costs of postclosure during the postclosure period.
2. Each owner or operator shall prepare a new closure or postclosure cost estimate whenever any of the following occurs:
 - a. Changes in operating plans or facility design affect the closure or postclosure plans;
 - b. There is a change in the expected year of closure; and
 - c. The department directs the owner or operator to revise the closure or postclosure plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-03. Financial assurance mechanism for closure and postclosure.

1. Each owner or operator of an applicable solid waste disposal facility shall establish one or more financial assurance mechanisms which together total an amount equal to the closure cost estimate or postclosure cost estimate prepared in accordance with section 33.1-20-14-02.
2. Each financial assurance mechanism must be approved by the department. The following financial assurance mechanisms are acceptable, provided respective requirements of section 33.1-20-14-07 are met:
 - a. Reserve account;
 - b. Trust fund;
 - c. Surety bond;
 - d. Irrevocable letter of credit;
 - e. Financial test;
 - f. Insurance policy; and
 - g. Corporate guarantee in accordance with the form and content of subdivision a of subsection 8 of section 33.1-24-05-81.
3. A trust fund, surety bond, letter of credit, corporate guarantee, financial test, or insurance policy may be terminated or canceled only if alternate financial assurance is substituted or if the owner or operator is released from the requirement by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-04. Implementation of financial assurance for closure and postclosure.

1. The closure plan and postclosure plan required by this article must specify the financial assurance mechanisms required by this chapter and, if a reserve account, trust fund, surety bond, or insurance policy, the methods and schedules for funding the mechanisms.
2. Publicly owned solid waste disposal facilities shall comply with the following:
 - a. Closure and postclosure financial assurance funds must be generated for each facility as indicated in the closure and postclosure plans;
 - b. Each facility owner or operator must establish a procedure with the trustee of the financial assurance mechanism for notification of nonpayment of funds to be sent to the department; and
 - c. Each owner or operator shall file with the department no later than August thirty-first of each succeeding year an annual report of the financial assurance mechanism established for closure and postclosure activities.
3. Privately owned solid waste disposal facilities shall comply with the following:

- a. Each owner or operator shall file with the department no later than August thirty-first of each succeeding year an annual audit of the financial assurance mechanisms established for closure and postclosure activities; and
- b. Annual audits must be conducted by a certified public accountant licensed in the state and must be filed with the department no later than August thirty-first of each year for the previous calendar year, including each year of the postclosure period.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-05. Financial assurance for corrective action.

1. The department may require an owner or operator to undertake remedial measures, including corrective action, under the provisions of subsection 10 of North Dakota Century Code section 23.1-08-03 and chapter 61-28 when a release occurs.
2. An owner or operator required to undertake corrective action must have a detailed estimate, in current dollars, of the cost of hiring a third party to perform the corrective action.
 - a. The cost estimate must account for the total costs of corrective action for the entire corrective action period.
 - b. The owner or operator must annually adjust the cost estimate for inflation until corrective action is completed.
 - c. The owner or operator shall increase the cost estimate if changes in corrective action or conditions increase the total costs. The owner or operator may reduce the cost estimate if the total costs exceed the maximum remaining costs of corrective action.
3. An owner or operator required to undertake corrective action shall establish financial assurance in accordance with section 33.1-20-14-07 no later than one hundred twenty days after the corrective action remedy has been selected. The owner or operator shall provide continuous coverage for corrective action until demonstrating compliance with article 33.1-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-06. Liability requirements for industrial waste landfills.

An owner or operator of an industrial waste landfill shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated with one or more of the mechanisms listed in subsection 2 of section 33.1-20-14-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

33.1-20-14-07. Specific requirements of mechanisms for financial assurance.

1. **Trust fund.** A trust fund must satisfy the requirements of this subsection.

- a. The trustee must be an entity which has authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- b. Payments into the trust fund must be made annually over the initial permit or over the remaining life of the solid waste management unit or facility, whichever is shorter. This is the pay-in period.
- c. The first payment into the trust fund must equal or exceed the current cost estimate for closure or postclosure, whichever is applicable, divided by the number of years defined in subdivision b. The amount of subsequent payments must be determined by the following formula:

$$\text{Next payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

Where CE is the current cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

- d. The initial payment into the trust fund must be made for new or expanded facilities before the initial receipt of solid waste or for existing facilities before the effective date as provided by subsection 1 of section 33.1-20-14-01.
- e. If an owner or operator establishes a trust fund after having used one or more alternative mechanisms specified in section 33.1-20-14-03, the initial payment into the trust fund must equal or exceed the amount that the fund would contain if the fund were established initially and annual payments made according to subdivision c.
- f. The owner or operator, or other person authorized to conduct closure or postclosure care may request reimbursement from the trustee for these expenses. Requests for reimbursement will be approved by the trustee only if sufficient funds are remaining in the trust fund.

2. **Surety bond.** A surety bond guaranteeing payment or performance must satisfy to the requirements of this subsection.

- a. The penal sum of the bond must be in an amount equal to or greater than the current closure or postclosure cost estimate, whichever is applicable.
- b. Under the terms of the bond, the surety must become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- c. The owner or operator must establish a standby trust fund that meets the requirement of subsection 1, except for payment provisions in subdivisions b, c, and d.

d. Payments made under the terms of the bond must be deposited by the surety into the standby trust fund. Payments from the trust fund must be approved by the trustee.

e. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department one hundred twenty days or more in advance of the cancellation. If the surety cancels the bond, the owner or operator must obtain alternate financial assurance.

3. Letter of credit. A letter of credit must satisfy the requirements of this subsection.

a. The issuing institution of a letter of credit must have authority to issue letters of credit and its operations must be regulated and examined by a federal or state agency.

b. A letter from the owner or operator, referring to the letter of credit by number, issuing institution, and date and including the name and address of the solid waste management unit or facility and the amount of funds assured, must be provided with the letter of credit to the department.

c. The letter of credit must be irrevocable and issued for a period of at least one year in an amount at least equal to the current cost estimate for closure or postclosure care, whichever is applicable. The letter of credit must provide that the expiration date will be automatically extended for a period of one year unless the issuing institution has canceled the letter of credit by sending notice of cancellation to the owner or operator and to the department one hundred twenty days or more in advance of the cancellation. If the letter of credit is canceled by the issuing institution, the owner or operator must obtain alternate financial assurance.

4. Insurance. Insurance must satisfy the requirements of this subsection.

a. The insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

b. The insurance policy must guarantee that funds will be available to close the solid waste management unit or facility whenever closure occurs or to provide postclosure care whenever the postclosure period begins, whichever is applicable. The policy must also guarantee that, once closure or postclosure care begins, the insurer will be responsible for paying out funds to the owner or operator or other person authorized to conduct closure or postclosure care up to an amount equal to the face amount of the policy.

c. The insurance policy must be issued for a face amount at least equal to the current cost estimate for closure or postclosure care, whichever is applicable. The term face amount means the total amount the insurer is obligated to pay under the policy.

d. Each insurance policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer.

e. The insurance policy must provide that the insurer may not cancel, terminate, or fail to renew the policy, except for failure to pay the premium. The automatic renewal of the policy must provide the insured with the option of renewal at the face

amount of the expiring policy. If there is a failure to pay a premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the owner or operator and to the department one hundred twenty days or more in advance of cancellation. If the insurer cancels the policy, the owner or operator must obtain alternate financial assurance.

5. Financial test and corporate guarantee. A financial test or corporate guarantee must satisfy the requirements of this subsection.

a. For the financial test, the owner or operator must have:

(1) A ratio of current assets to current liabilities greater than one and five-tenths, or a current rating for the owner's or operator's most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(2) Net working capital and tangible net worth each at least four times the sum of the current cost estimates for closure or postclosure, whichever is applicable; and

(3) Tangible net worth of at least two million dollars; and

(4) Assets located in the United States amounting to at least four times the current cost estimates for closure or postclosure care, whichever is applicable.

b. To demonstrate the financial test, the owner or operator must submit the following items to the department in a letter which transmits:

(1) A copy of an independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest fiscal year; and

(2) A report from an independent certified public accountant to the owner or operator stating that:

(a) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, yearend financial statements for the latest fiscal year; and

(b) In connection with that procedure, no matters came to lead the accountant to believe that specified data should be adjusted.

c. After initial submission of the items in subdivision b, the owner or operator must send updated information to the department no later than August thirty-first of each succeeding fiscal year. This information must consist of all items specified in subdivision b.

d. If the owner or operator no longer meets the requirements of subdivision a, the owner or operator must send notice by certified mail to the department within ninety days and establish alternate financial assurance within one hundred twenty days.

e. The department may disallow use of the financial test on the basis of qualification in the opinion expressed by the certified public accountant in the accountant's report on examination of owner's or operator's statements. An adverse opinion or a disclaimer of opinion may be cause for disallowance. The owner or operator shall

provide alternate financial assurance within thirty days after notification of the disallowance.

f. An owner or operator may meet the requirements of this subsection by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a substantial business relationship with the owner or operator. The guarantor must meet the requirements of subdivisions a through e and a certified copy of the guarantee must accompany the items in subdivision b. The terms of the guarantee must provide that:

- (1) Guarantor will complete closure or postclosure care, whichever is applicable, if the owner or operator fails to do so; and
- (2) The corporate guarantee will remain in effect unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the department; and
- (3) Guarantor will provide alternate financial assurance within ninety days if the corporate guarantee is canceled and if the owner or operator fails to provide approved alternate financial assurance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-15 **SOLID WASTE MANAGEMENT FEES**

Section

33.1-20-15-01 Application Processing Fee

33.1-20-15-02 Annual Permit Fee

33.1-20-15-01. Application processing fee.

1. Applicants for permits for transporting solid waste and for solid waste management facilities shall pay, at the time the permit application is filed, an application processing fee as follows:
 - a. Seventy-five dollars for a solid waste transporter.
 - b. Five thousand dollars for any resource recovery system or facility.
 - c. One thousand dollars for any municipal waste landfill facility that receives on average less than twenty tons [18.2 metric tons] per day.
 - d. Three thousand dollars for any municipal waste landfill facility that receives on average from twenty tons [18.2 metric tons] per day to fifty tons [45.4 metric tons] per day.
 - e. Five thousand dollars for any municipal waste landfill facility that receives on average more than fifty tons [45.4 metric tons] per day to five hundred tons [453.5 metric tons] per day.

- f. Twenty thousand dollars for any municipal waste landfill facility that receives on average more than five hundred tons [453.5 metric tons] per day.
 - g. Three thousand dollars for any surface impoundment facility plus two thousand dollars for each surface impoundment included in the facility. A surface impoundment receiving an average of more than ten tons [9.1 metric tons] of waste per day and which will be closed with the waste materials remaining in place shall pay applicable fees for the appropriate size of industrial waste or special waste landfill facility.
 - h. One thousand dollars for any industrial waste or special waste landfill facility that receives on average ten tons [9.1 metric tons] per day or less.
 - i. Ten thousand dollars for any industrial waste or special waste facility that receives on average more than ten tons [9.1 metric tons] but less than one hundred tons [90.7 metric tons] per day.
 - j. Twenty thousand dollars for any industrial waste or special waste facility that receives on average one hundred tons [90.7 metric tons] or more per day.
 - k. Two thousand dollars for any inert waste landfill that receives on average more than forty tons [18.1 metric tons] per day.
2. Modifications of existing unexpired permits which are initiated by the department may not require an application processing fee. Modifications of existing unexpired permits not initiated by the department that require major review may be required to submit a processing fee with the modification request.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 23.1-08-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-10; S.L. 2017, ch. 199, § 23

33.1-20-15-02. Annual permit fee.

Beginning July 1, 1993, the owners or operators of an activity or facility required to have a permit under these rules are subject to an annual permit fee for each permit. The fee period must begin each July first and the fee must be paid by July thirty-first. All fees must be made payable to the North Dakota department of environmental quality. The annual permit fee is as follows:

- 1. For transport of solid waste twenty-five dollars.
- 2. For a resource recovery system or facility system five hundred dollars.
- 3. For industrial waste or special waste facility five hundred dollars.
- 4. For a municipal waste landfill facility receiving on average more than twenty tons [18.2 metric tons] per day but less than fifty tons [45.4 metric tons] per day five hundred dollars.
- 5. For a municipal waste landfill facility receiving on average more than fifty tons [45.4 metric tons] per day and less than five hundred tons [453.5 metric tons] per day one thousand dollars.
- 6. For a municipal waste landfill facility receiving on average more than five hundred tons [453.5 metric tons] per day five thousand dollars.

7. For a surface impoundment facility five hundred dollars.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03, 23.1-08-10; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-10; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-16 **CERTIFICATION OF OPERATORS**

Section

33.1-20-16-01 Responsibility

33.1-20-16-02 Certification and Application

33.1-20-16-03 Training Course and Certification Requirements

33.1-20-16-04 Certificate Revocation

33.1-20-16-05 Term and Renewal of Certificates

33.1-20-16-01. Responsibility.

Permittees of all municipal waste landfills and municipal waste incinerators in North Dakota are required to have a certified operator onsite at all times during operation of the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-16-02. Certification and application.

1. In order to be certified as a municipal waste landfill operator, an applicant must take and pass a written examination given by the department or its authorized representative.
2. The department shall charge certification fees of twenty-five dollars for initial certification and fifteen dollars for annual renewal.
3. An individual desiring to attend the training session and take the certification examination shall file and submit the fee and application form at least thirty days before the scheduled training and certification session.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-16-03. Training course and certification requirements.

1. To be eligible for certification, a landfill or incinerator operator must have a minimum of one year experience in operating a municipal waste landfill or incinerator and attend a training session approved by the department for municipal waste facilities.
2. Training sessions will be held at least annually by the department to provide information on municipal waste landfill and incinerator operation and maintenance.
3. An applicant may submit documentation to demonstrate the equivalency of other training courses and certification successfully completed. The applicant may be eligible for certification without taking the training course or written examination if the department finds that the training and certification are substantially equivalent.

4. Applicants who fail an examination may reapply to the department.
5. Upon passage of the examination with a score of seventy percent or better, the department will issue a certificate to the applicant.
6. The certificates of personnel who terminate their employment at a landfill or incinerator facility will remain valid until expiration.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-16-04. Certificate revocation.

The department may suspend or revoke the certificate of an operator if it is found that the operator has practiced fraud or deception in obtaining the certificate or in the performance of operator duties. No certificate may be revoked or suspended except after a hearing conducted in accordance with North Dakota Century Code chapter 28-32. Upon certificate suspension or revocation, a new application for certification may be considered by the department if the conditions upon which the suspension or revocation was based have been corrected and evidence of this fact has been satisfactorily submitted to the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-15; S.L. 2017, ch. 199, § 23

33.1-20-16-05. Term and renewal of certificates.

Certificates expire each year on June thirtieth. The holder must reapply for renewal of an expired certificate and pay the renewal fee by July first. To be eligible for renewal, each certified operator must attend at least one departmentally approved training course every three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-08-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-08-03, 23.1-08-15; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-17 **SOLID WASTE MANAGEMENT PLANNING**

Section

33.1-20-17-01 District Solid Waste Management Plans

33-20-17-01. District solid waste management plans.

1. The comprehensive solid waste management plan required by North Dakota Century Code chapter 23-29 for each solid waste management district must be developed and implemented for the following purposes:
 - a. Reduce the amount of solid waste generated.
 - b. Reuse materials.
 - c. Composting leaves and grass clippings.

- d. Recycle everything possible.
 - e. Recover energy from waste.
 - f. Landfill the remaining wastes.
 - g. To coordinate solid waste management among district political subdivisions.
2. At a minimum, each district solid waste management plan must contain the following plan elements:
- a. Documentation demonstrating compliance with North Dakota Century Code chapter 23-29 for formation of the district.
 - b. Solid waste management goals and objectives for ten-year plan.
 - c. Solid waste inventory (including special wastes, regulated infectious wastes and tires excluding regulated hazardous wastes), types, and quantities for each community and county; and a district summary.
 - d. Solid waste amounts and types transported to another district or state; and the amounts, types, and sources of waste received from another district or state.
 - e. Descriptions of existing solid waste collectors, service areas, routes, transfer stations, and types of service for all communities and counties served.
 - f. Descriptions of existing resource recovery, waste processing, and disposal methods and facilities, existing waste minimization practices, and local markets for recoverable waste materials; assessments of the capacities of these methods, practices, and markets; and identification of potential and new resource recovery efforts and markets.
 - g. Identification of current solid waste management problems, evaluate solutions, and identify a course of action to solve those problems.
 - h. Methods, procedures, or programs adequate to meet the following goals specified in North Dakota Century Code section 23-29-02:
 - (1) At least a ten percent reduction in volume of municipal waste deposited in landfills by 1995.
 - (2) At least a twenty percent reduction in volume of municipal waste deposited in landfills by 1997.
 - (3) At least a forty percent reduction in volume of municipal waste deposited in landfills by 2000.
 - i. Future solid waste management issues which may require adjustments to adopted solid waste management plans.
 - j. Implementation plan and schedule and a funding mechanism for the activities and strategies in the plan.
 - k. Existing local ordinances and rules and a strategy for the district's compliance with the plan.

- l. Ensure and document public involvement and acceptance of the plan.
 - m. Resolution of adoption of the plan by the district.
 - n. Provision to review, amend, update, and submit solid waste management plans to the department every five years.
3. As required by North Dakota Century Code section 23-29-06, the districts must submit plans to the department for approval.

History: Effective _____, 2018.

General Authority: NDCC 23-29-04; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23-29-04, 23-29-06; S.L. 2017, ch. 199, § 23

CHAPTER 33.1-20-18 **SOLID WASTE MANAGEMENT FUND**

Section

33.1-20-18-01 Solid Waste Management Fund

33-20-18-01. Solid waste management fund.

- 1. Any political subdivision may apply for a loan or grant from the solid waste management fund.
- 2. The loan or grant application must be submitted to the department and include the following:
 - a. The political entity applying for the grant or loan.
 - b. The purpose of the grant or loan application:
 - (1) Market development.
 - (2) Waste reduction.
 - (3) Resource recovery.
 - (4) Recycling.
 - (5) Planning.
 - c. A description of how the proposed project is consistent with the district solid waste management plan.
 - d. A description of the work plan, implementation procedures, and schedule.
 - e. Identification of the amount of grant or loan requested and a cost analysis of the entire project.
 - f. Progress reporting schedule.

History: Effective _____, 2018.

General Authority: NDCC 23-29-04, 23-29-07.5; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23-29-04, 23-29-07.5; S.L. 2017, ch. 199, § 23

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-23 is created as follows, subject to the contingency in S.L. 2017, ch. 199, § 75:

ARTICLE 33.1-23
DIVISION OF CHEMISTRY LABORATORIES

Chapter
33.1-23-01 Fees for Chemistry Laboratories Analyses

CHAPTER 33.1-23-01
FEES FOR CHEMISTRY LABORATORIES ANALYSES

Section
33.1-23-01-01 Fees Charged for Laboratory Analyses

33.1-23-01-01. Fees charged for laboratory analyses.

Charges are based on reagent cost, testing time, personnel salaries, and overhead costs.

History: Effective _____, 2018.

General Authority: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-01-03; S.L. 2017, ch. 199, § 16

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-24 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-24

HAZARDOUS WASTE MANAGEMENT

Chapter

- 33.1-24-01 General Provisions
- 33.1-24-02 Identification and Listing of Hazardous Waste
- 33.1-24-03 Standards for Generators
- 33.1-24-04 Standards for Transporters
- 33.1-24-05 Standards for Treatment, Storage, and Disposal Facilities and for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
- 33.1-24-06 Permits
- 33.1-24-07 Permitting Procedures
- 33.1-24-08 Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks

CHAPTER 33.1-24-01
GENERAL PROVISIONS

Section

- 33.1-24-01-01 Purpose
- 33.1-24-01-02 Scope
- 33.1-24-01-03 Authority
- 33.1-24-01-04 Definitions
- 33.1-24-01-05 References
- 33.1-24-01-06 General Rulemaking Petitions
- 33.1-24-01-07 Petitions for Equivalent Testing or Analytical Methods
- 33.1-24-01-08 Petitions to Amend Chapter 33.1-24-02 to Exclude a Waste Produced at a Particular Facility and Amend Chapter 33.1-24-05 to Include Additional Hazardous Waste as Universal Waste
- 33.1-24-01-09 Nonwaste Determinations and Variances From Classification as a Solid Waste
- 33.1-24-01-10 Standards and Criteria for Variances From Classification as a Solid Waste
- 33.1-24-01-11 Variance to Be Classified as a Boiler
- 33.1-24-01-12 Procedures for Variances From Classification as a Solid Waste, for Variances to Be Classified as a Boiler or for Nonwaste Determinations
- 33.1-24-01-13 Additional Regulation of Certain Hazardous Waste Recycling Activities on a Case-by-Case Basis
- 33.1-24-01-14 Procedures for Case-by-Case Regulation of Hazardous Waste Recycling Activities
- 33.1-24-01-15 Variances
- 33.1-24-01-16 Availability of Information
- 33.1-24-01-17 Standards and Criteria for Nonwaste Determinations
- 33.1-24-01-18 Notification Requirements for Hazardous Secondary Materials
- 33.1-24-01-19 Legitimate Recycling of Hazardous Secondary Materials

33.1-24-01-01. Purpose.

It is the purpose of this article to provide for the comprehensive regulation of hazardous waste from "cradle-to-grave" in order to protect public health, safety and welfare, and to enhance the environment for the people of North Dakota.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-02. Scope.

This article is applicable to all hazardous waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-03. Authority.

The department has been authorized to promulgate and administer this article under the provisions of North Dakota Century Code chapter 23.1-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-04. Definitions.

As used in this article the following words have the meaning ascribed to them unless otherwise made inappropriate by use and context.

1. "Aboveground tank" means a device meeting the definition of "tank" in this section and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.
2. "Act" means North Dakota Century Code chapter 23.1-04.
3. "Active life" of a facility means the period from the initial receipt of hazardous waste at the facility until the department receives certification of final closure.
4. "Active portion" means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after the effective date of the Act and which is not a closed portion. (See also "closed portion" and "inactive portion".)
5. "Administrator" or "regional administrator" means the administrator or regional administrator of the environmental protection agency, or that officer's designee.
6. "Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to storage or treatment tank or tanks, between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal offsite.

7. "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.
8. "Authorized representative" means the person responsible for the overall operation of a facility or an operational unit (for example, part of a facility), for example, the plant manager, superintendent, or person of equivalent responsibility.
9. "Battery" means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.
10. "Boiler" means an enclosed device using controlled flame combustion and:
 - a. Boilers must have the following characteristics:
 - (1) The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases;
 - (2) The unit's combustion chamber and primary energy recovery section or sections must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section or sections (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section or sections are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: Process heaters (units that transfer energy directly to processed steam) and fluidized bed combustion units;
 - (3) While in operation, the unit must maintain a thermal energy recovery efficiency of at least sixty percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and
 - (4) The unit must export and utilize at least seventy-five percent of the recovered energy, calculated on an annual basis. In this calculation, no credit should be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or
 - b. The unit is one which the department has determined, on a case-by-case basis, to be a boiler, after considering the standards of section 33.1-24-01-11.
11. "Carbon dioxide stream" means carbon dioxide that has been captured from an emission source (for example, power plant), plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process.
12. "Carbon regeneration unit" means any enclosed thermal treatment device used to regenerate spent activated carbon.

13. "Cathode ray tube" means a vacuum tube, composed primarily of glass, which is the visual or video display component of an electronic device. A used, intact cathode ray tube means a cathode ray tube whose vacuum has not been released. A used, broken cathode ray tube means glass removed from its housing or casing whose vacuum has been released.
14. "Cathode ray tube collector" means a person who receives used, intact cathode ray tubes for recycling, repair, resale, or donation.
15. "Cathode ray tube exporter" means any person in the United States who initiates a transaction to send used cathode ray tubes outside the United States or its territories for recycling or reuse, or any intermediary in the United States arranging for such export.
16. "Cathode ray tube glass manufacturer" means an operation or part of an operation that uses a furnace to manufacture cathode ray tube glass.
17. "Cathode ray tube processing" means conducting all of the following activities:
 - a. Receiving broken or intact cathode ray tubes; and
 - b. Intentionally breaking intact cathode ray tubes or further breaking or separating broken cathode ray tubes; and
 - c. Sorting or otherwise managing glass removed from cathode ray tube monitors.
18. "Certification" means a statement of professional opinion based on knowledge and belief.
19. "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)
20. "Component" means:
 - a. Either the tank or ancillary equipment of a tank system; or
 - b. Any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function (for example, a pump seal, pump, kiln liner, or kiln thermocouple).
21. "Conditionally exempt small quantity generator" means a generator who generates no more than one hundred kilograms of hazardous waste in a calendar month.
22. "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.
23. "Constituent" or "hazardous waste constituent" means a constituent that caused the department to list the hazardous waste in chapter 33.1-24-02, or a constituent listed in Table 1 of section 33.1-24-02-14.
24. "Contained" means held in a unit (including a land-based unit as defined in this section) that meets the following criteria:
 - a. The unit is in good condition, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary materials, to prevent releases of hazardous secondary materials to the environment. Unpermitted releases are releases that are not covered by a permit (such as a permit to discharge to water or air) and may include

releases through surface transport by precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures;

b. The unit is properly labeled or otherwise has a system (such as a log) to immediately identify the hazardous secondary materials in the unit; and

c. The unit holds hazardous secondary materials that are compatible with other hazardous secondary materials placed in the unit and is compatible with the materials used to construct the unit and addresses any potential risks of fires or explosions.

d. Hazardous secondary materials in units that meet the applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, or subsection 5 of section 33.1-24-06-16.

25. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

26. "Containment building" means a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of sections 33.1-24-05-475 through 33.1-24-05-479 and subpart DD of 40 CFR 265.

27. "Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

28. "Corrosion expert" means a person who, by reason of the person's knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the national association of corrosion engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

29. "Department" means the department of environmental quality.

30. a. "Designated facility" means a hazardous waste treatment, storage, or disposal facility that:

(1) Has received a permit (or interim status) in accordance with the requirements of chapters 33.1-24-06 and 33.1-24-07;

(2) Has received a permit (or interim status) from a state authorized in accordance with 40 CFR part 271; or

(3) Is regulated under subdivision b of subsection 3 of section 33.1-24-02-06 or sections 33.1-24-05-230 through 33.1-24-05-234; and

(4) Has been designated on the manifest by the generator pursuant to section 33.1-24-03-04.

b. Designated facility also means a generator site designated on the manifest to receive the generator's waste as a return shipment from a facility that has rejected the waste in accordance with subsection 6 of section 33.1-24-05-39 or the applicable requirements of subsection 5 of section 33.1-24-06-16.

c. If a waste is destined to a facility in an authorized state which has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility must be a facility allowed by the receiving state to accept such waste.

31. "Destination facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in subsections 1 and 3 of section 33.1-24-05-713. A facility at which a particular category of universal waste is only accumulated is not a destination facility for the purposes of managing that category of universal waste.

32. "Dike" means an embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

33. "Dioxins and furans" means tetra-chlorinated, penta-chlorinated, hexa-chlorinated, hepta-chlorinated, and octa-chlorinated dibenzo dioxins and furans.

34. "Discharge" or "hazardous waste discharge" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

35. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid or hazardous waste into or on any land or water including ground water.

36. "Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which wastes will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

37. "Drip pad" is an engineered structure consisting of a curbed, free-draining base, constructed of nonearthen materials and designed to convey preservative kickback or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

38. "Electronic manifest" (or e-manifest) means the electronic format of the hazardous waste manifest which is obtained from environmental protection agency's national e-manifest system and transmitted electronically to the system, and which is the legal equivalent of environmental protection agency forms 8700-22 (manifest) and 8700-22A (continuation sheet).

39. "Electronic manifest system (or e-manifest system)" means environmental protection agency's national information technology system through which the electronic manifest may be obtained, completed, transmitted, and distributed to users of the electronic manifest and to regulatory agencies.

40. "Elementary neutralization unit" means a device which:

a. Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in section 33.1-24-02-12, or are listed in chapter 33.1-24-02 only for this reason; and

b. Meets the definition of tank, tank systems, container, transport vehicle, or vessel.

41. "Equivalent method" means any testing or analytical method approved by the department under sections 33.1-24-01-06 and 33.1-24-01-07.

42. "Existing hazardous waste management facility" or "existing facility" means a facility which was in operation, or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

a. The owner or operator has obtained all necessary federal, state, and local approvals or permits necessary to begin physical construction; and

b. Either of the following:

(1) A continuous onsite, physical construction program has begun; or

(2) The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.

43. "Existing portion" means that land surface area of an existing waste management unit, included in part A of the permit application, as originally filed, on which wastes have been placed prior to the issuance of a permit.

44. "Existing tank system" or "existing component" means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either (1) a continuous onsite physical construction or installation program has begun, or (2) the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within a reasonable time.

45. "Explosives or munitions emergency" means a situation involving the suspected or detected presence of unexploded ordnance, damaged or deteriorated explosives or munitions, an improvised explosive device, other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, or eliminate the threat.

46. "Explosives or munitions emergency response" means all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions, or transporting, or any combination, those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and munitions emergency responses can occur on either public or private lands and are not limited to responses at hazardous waste facilities.

47. "Explosives or munitions emergency response specialist" means an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include department of defense emergency explosive ordnance disposal, technical escort unit, and department of defense-certified civilian or contractor personnel and other federal, state, or

local government, or civilian personnel similarly trained in explosives or munitions emergency responses.

48. "Facility" means:

a. All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary materials prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combinations of them).

b. For the purpose of implementing corrective action under section 33.1-24-05-58 or 33.1-24-05-1031 all contiguous property under the control of the owner or operator seeking a permit under North Dakota Century Code chapter 23.1-04. This definition also applies to facilities implementing corrective action under Resource Conservation and Recovery Act section 3008(h).

c. Notwithstanding subdivision b, a remediation waste management site is not a facility that is subject to section 33.1-24-05-58, but is subject to corrective action requirements if the site is located within such a facility.

49. "Facility mailing list" means the mailing list for a facility developed and maintained by the department in accordance to the following:

a. Including those persons who request in writing to be added to the facility mailing list;

b. Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

c. Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as regional and state-funded newsletters, environmental bulletins, or state law journals. (The department may update the mailing list from time to time by requesting written indication of continued interest from those listed. The department may delete from the list the name of any person who fails to respond to such a request.)

50. "Federal agency" means any department, agency, or other instrumentality of the federal government, any independent agency or establishment of the federal government including any government corporation, and the government printing office.

51. "Federal, state, and local approvals or permits necessary to begin physical construction" means permits and approvals required under federal, state, or local hazardous waste control statutes, regulations, or ordinances.

52. "Final closure" means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under chapter 33.1-24-05 are no longer conducted at the facility unless subject to the provisions in section 33.1-24-03-12.

53. "Food-chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

54. "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

55. "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike and the surface of the waste contained therein.
56. "Functionally equivalent component" means a component which performs the same function or measurement and which meets or exceeds the performance specification of another component.
57. "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in chapter 33.1-24-02 or whose act first causes a hazardous waste to become subject to regulation.
58. "Ground water" means water below the land surface in a zone of saturation.
59. "Hazardous secondary material" means a secondary material (for example, spent material, byproduct or sludge) that, when discarded, would be identified as hazardous waste under chapter 33.1-24-02.
60. "Hazardous secondary material generator" means any person whose act or process produces hazardous secondary materials at the generating facility. For purposes of this subsection, "generating facility" means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator.
61. "Hazardous waste" means a hazardous waste as defined in chapter 33.1-24-02.
62. "Hazardous waste constituent". See "constituent".
63. "Hazardous waste management unit" is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.
64. "Hazardous waste number" means the number assigned to each hazardous waste identified in chapter 33.1-24-02.
65. "Identification number" means the number assigned by the environmental protection agency and the department to each generator, transporter, and treatment, storage, or disposal facility.
66. "In operation" refers to a facility which is treating, storing, or disposing of hazardous waste.
67. "Inactive portion" means that portion of a facility which is not operated after the effective date of this chapter. (See also "active portion" and "closed portion".)
68. "Incinerator" means any enclosed device that:
- a. Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or
 - b. Meets the definition of infrared incinerator or plasma arc incinerator.
69. "Incompatible waste" means a hazardous waste which is unsuitable for:
- a. Placement in a particular device or facility because it may cause corrosion or decay of containment materials (for example, container inner liners or tank walls); or

b. Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dust, mists, fumes, or gases, or flammable fumes or gases.

(See appendix III of chapter 33.1-24-05 for examples.)

70. "Individual generation site" means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste, but is considered a single or individual generation site if the site or property is contiguous.

71. "Industrial furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of material for energy:

a. Cement kilns;

b. Lime kilns;

c. Aggregate kilns;

d. Phosphate kilns;

e. Coke ovens;

f. Blast furnaces;

g. Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces);

h. Titanium dioxide chloride process oxidation reactors;

i. Methane reforming furnaces;

j. Pulping liquor recovery furnaces;

k. Combustion devices used in the recovery of sulfur values from spent sulfuric acid;

l. Halogen acid furnaces for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least three percent; the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of twenty percent as generated; or

m. Such other devices as the department may, after notice and comment, add to this list on the basis of one or more of the following factors:

(1) The design and use of the device primarily to accomplish recovery of material products;

(2) The use of the device to burn or reduce raw materials to make a material product;

(3) The use of a device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feed stock;

(4) The use of a device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

(5) The use of a device in common industrial practice to produce a material product; and

(6) Other factors, as appropriate.

72. "Infrared incinerator" means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

73. "Inground tank" means a device meeting the definition of a "tank" in this section whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

74. "Injection well" means a well into which fluids are injected. (See also the definition of "underground injection" in this section.)

75. "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

76. "Installation inspector" means a person who, by reason of knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

77. "Intermediate facility" means any facility that stores hazardous secondary materials for more than ten days, other than a hazardous secondary material generator or reclaimer of such material.

78. "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

79. "Lamp", also referred to as "universal waste lamp", is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infrared regions of the electromagnetic spectrum. Examples of common universal waste lamps include fluorescent, high-intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

80. "Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

81. "Land-based unit" means an area where hazardous secondary materials are placed in or on the land before recycling. This definition does not include land-based production units.

82. "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

83. "Landfill cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

84. "Large quantity generator" means a generator who generates one thousand kilograms or more of hazardous waste in a calendar month.
85. "Leachate" means any liquid, including any suspended components in the liquid, that have percolated through or drained from hazardous waste.
86. "Leak detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls (for example, daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.
87. "Liner" means a continuous layer of natural or manmade materials beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.
88. "Major facility" means any facility classified as such by the environmental protection agency in conjunction with the department.
89. "Management" or "hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.
90. "Manifest" means the shipping document environmental protection agency form 8700-22 (including, if necessary, environmental protection agency form 8700-22A), or the electronic manifest, originated and signed in accordance with the applicable requirements of chapters 33.1-24-03 and 33.1-24-04, sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, and subsection 5 of section 33.1-24-06-16.
91. "Manifest tracking number" means the alphanumeric identification number (for example, a unique three letter suffix preceded by nine numerical digits), which is preprinted in item 4 of the manifest by a registered source.
92. "Mercury-containing equipment" means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.
93. "Military munitions" means all ammunition products and components produced or used by or for the United States department of defense or the United States armed services for national defense and security, including military munitions under the control of the department of defense, the United States coast guard, the United States department of energy, and national guard personnel. The term military munitions includes confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by department of defense components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof. Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include nonnuclear components of nuclear devices, managed under department of energy's nuclear weapons program after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed.

94. "Mining overburden returned to the minesite" means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.
95. "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR part 146, containment building, corrective action management unit, unit eligible for research, development, and demonstration permit under section 33.1-24-06-20, or staging pile.
96. "Movement" means that hazardous waste transported to a facility in an individual vehicle.
97. "Municipality" means a city, county, district, association, or other public body created by or pursuant to state law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes.
98. "New hazardous waste management facility" or "new facility" means a facility which began operation, or for which construction commenced, after November 19, 1980. (See also "existing hazardous waste management facility".)
99. "New tank system" or "new tank components" means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of subdivision b of subsection 7 of section 33.1-24-05-106, a new tank system is one for which construction commences after July 14, 1986. (See also "existing tank system".)
100. "No free liquids" as used in subdivision w of subsection 1 and subdivision p of subsection 2 of section 33.1-24-02-04, means that solvent-contaminated wipes may not contain free liquids as determined by method 9095B (paint filter liquids test), included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (environmental protection publication SW-846), as incorporated by reference in section 33.1-24-01-05, and that there is no free liquid in the container holding the wipes.
101. "Onground tank" means a device meeting the definition of "tank" in this section and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.
102. "Onsite" means the same or geographically contiguous property which may be divided by public or private right of way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing, as opposed to going along, the right of way. Noncontiguous property owned by the same person, but connected by a right of way which that person controls and to which the public does not have access is also considered onsite property.
103. "Open burning" means the combustion of any material without the following characteristics:
- a. Control of combustion air to maintain adequate temperature for efficient combustion;
 - b. Containment of the combustion reactions in an enclosed device to provide sufficient residence time and mixing for complete combustion; and
 - c. Control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment".)
104. "Operator" means the person responsible for the overall operation of a facility.

105. "Owner" means the person who owns a facility or part of a facility.
106. "Partial closure" means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of chapter 33.1-24-05 at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.
107. "Permit" means an authorization, license, or equivalent control document issued by the department to implement the requirements of chapters 33.1-24-06 and 33.1-24-07. Permit includes permit by rule (section 33.1-24-06-18), emergency permit (subsection 1 of section 33.1-24-06-19) and standardized permit (sections 33.1-24-06-45 through 33.1-24-06-85). Permit does not include hazardous waste interim status (section 33.1-24-06-16), or any permit that has not been the subject of final department action, such as a draft permit or a proposed permit.
108. "Person" means an individual, trust, firm, joint stock company, federal agency, corporation (including a government corporation), partnership, association, state, municipality, commission, political subdivision of a state, or any interstate body.
109. "Personnel" or "facility personnel" means all persons who work at, or oversee the operation of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of chapter 33.1-24-05 or 40 CFR part 265.
110. "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:
- a. Is a new animal drug under federal Food, Drug, and Cosmetic Act section 201(w);
 - b. Is an animal drug that has been determined by regulation of the secretary of health and human services not to be a new animal drug; or
 - c. Is an animal feed under federal Food, Drug, and Cosmetic Act section 201(x) that bears or contains any substances described by subdivision a or b.
111. "Pile" means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.
112. "Plasma arc incinerator" means any enclosed device using a high-intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.
113. "Point source" means any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.
114. "Publicly owned treatment works" means any device or system used in the treatment (including recycling or reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by this state or a municipality. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a publicly owned treatment works providing treatment.
115. "Qualified ground water scientist" means a scientist or engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and has sufficient

training and experience in ground water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgments regarding ground water monitoring and contaminant fate and transport.

116. "Remanufacturing" means processing a higher value hazardous secondary material in order to manufacture a product that serves a similar functional purpose as the original commercial grade material. For the purpose of this subsection, a hazardous secondary material is considered higher value if it was generated from the use of a commercial grade material in a manufacturing process and can be remanufactured into a similar commercial grade material.
117. "Remediation waste" means all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris that are managed for implementing cleanup.
118. "Remediation waste management site" means a facility where an owner or operator is or will be treating, storing, or disposing of hazardous remediation wastes. A remediation waste management site is not a facility that is subject to corrective action under section 33.1-24-05-58, but is subject to corrective action requirements if the site is located in such a facility.
119. "Replacement unit" means a landfill, surface impoundment, or waste pile unit from which all or substantially all of the waste is removed, and which is subsequently reused to treat, store, or dispose of hazardous waste. "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or department-approved corrective action.
120. "Representative sample" means a sample of a universe or whole (for example, waste pile, lagoon, or ground water), which can be expected to exhibit the average properties of the universe or whole.
121. "Runoff" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.
122. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.
123. "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.
124. "Sludge" means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.
125. "Sludge dryer" means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of two thousand five hundred British thermal unit per pound of sludge treated on a wet-weight basis.
126. "Small quantity generator" means a generator who generates more than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month.
127. "Solid waste" means a solid waste as defined in section 33.1-24-02-02.
128. a. "Solvent-contaminated wipe" means a wipe that, after use or after cleaning up a spill, either:

- (1) Contains one or more of the F001 through F005 solvents listed in section 33.1-24-02-16 or the corresponding P- or U- listed solvents found in section 33.1-24-02-18;
- (2) Exhibits a hazardous characteristic found in sections 33.1-24-02-10 through 33.1-24-02-14 when that characteristic results from a solvent listed in chapter 33.1-24-02; or
- (3) Exhibits only the hazardous waste characteristic of ignitability found in section 33.1-24-02-11 due to the presence of one or more solvents that are not listed in chapter 33.1-24-02; or
- (4) Any combination of paragraphs 1, 2 or 3.
- b. Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions at subdivision w of subsection 1 of section 33.1-24-02-04 and subdivision p of subsection 2 of section 33.1-24-02-04.
129. "Sorbent" means a material that is used to soak up free liquids by either adsorption or absorption, or both. Sorb means to either adsorb or absorb, or both.
130. "Staging pile" means an accumulation of solid, nonflowing remediation waste that is not a containment building and that is used only during remedial operations for temporary storage at a facility. Staging piles must be designated by the department according to the requirements of section 33.1-24-05-554.
131. "Standardized permit" means a hazardous waste permit issued under sections 33.1-24-07-40 through 33.1-24-07-54 and sections 33.1-24-06-45 through 33.1-24-06-85 authorizing the facility owner or operator to manage hazardous waste. The standardized permit may have two parts: A uniform portion issued in all cases and a supplemental portion issued at the department's discretion.
132. "State" means this state.
133. "Storage" means the holding of hazardous waste at a site for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.
134. "Sump" means any pit or reservoir that meets the definition of tank and those troughs or trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.
135. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.
136. "Tank" means a stationary device, designed to contain an accumulation of hazardous waste, which is constructed primarily of nonearthen materials (for example, wood, concrete, steel, or plastic), which provide structural support.

137. "Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.
138. "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning".)
139. "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.
140. "Toxicity equivalence" means the international method of relating the toxicity of various dioxin, or furan, or both congeners to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin.
141. "Transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas, or other similar areas where shipments of hazardous waste or hazardous secondary materials are held during the normal course of transportation.
142. "Transport vehicle" means a motor vehicle or railcar used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.
143. "Transportation" means the movement of hazardous wastes by air, rail, highway, or water.
144. "Transporter" means a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.
145. "Treatability study" means a study in which a hazardous waste is subjected to a treatment process to determine:
- a. Whether the waste is amenable to the treatment process;
 - b. What pretreatment (if any) is required;
 - c. The optimal process conditions needed to achieve the desired treatment;
 - d. The efficiency of a treatment process for a specific waste or wastes; or
 - e. The characteristics and volumes of residuals from a particular treatment process.
- Also included in this definition for the purpose of subsections 5 and 6 of section 33.1-24-02-04 exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effect studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.
146. "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.
147. "Treatment zone" means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

148. "Underground injection" means the subsurface emplacement of fluids through a bored, drilled, or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also the definition of "injection well" in this section.)
149. "Underground tank" means a device meeting the definition of "tank" in this section whose entire surface area is totally below the surface of and covered by the ground.
150. "Unfit for use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.
151. "User of the electronic manifest system" means a hazardous waste generator, a hazardous waste transporter, an owner or operator of a hazardous waste treatment, storage, recycling, or disposal facility, or any other person that:
- a. Is required to use a manifest to comply with:
 - (1) Any federal or state requirement to track the shipment, transportation, and receipt of hazardous waste or other waste material that is shipped from the site of generation to an off-site designated facility for treatment, storage, recycling, or disposal; or
 - (2) Any federal or state requirement to track the shipment, transportation, and receipt of rejected wastes or regulated container residues that are shipped from a designated facility to an alternative facility, or returned to the generator; and
 - b. Elects to use the system to obtain, complete and transmit an electronic manifest format supplied by the environmental protection agency electronic manifest system, or
 - c. Elects to use the paper manifest form and submits to the system for data processing purposes a paper copy of the manifest (or data from such a paper copy), in accordance with paragraph 5 of subdivision b of subsection 1 of section 33.1-24-05-38, or the applicable requirements of subsection 5 of section 33.1-24-06-16. These paper copies are submitted for data exchange purposes only and are not the official copies of record for legal purposes.
152. "United States" means the fifty states, the District of Columbia, the commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the commonwealth of the northern Mariana Islands.
153. "Universal waste" means any of the following hazardous wastes that are managed under the universal waste requirements of sections 33.1-24-05-700 through 33.1-24-05-799:
- a. Batteries as described in section 33.1-24-05-702;
 - b. Pesticides as described in section 33.1-24-05-703;
 - c. Mercury-containing equipment as described in section 33.1-24-05-704; and
 - d. Lamps as described in section 33.1-24-05-705.
154. "Universal waste handler":
- a. Means:
 - (1) A generator (as defined in this section) of universal waste; or

(2) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.

b. Does not mean:

(1) A person who treats, except under the provisions of subsection 1 or 3 of section 33.1-24-05-713, disposes of, or recycles universal waste; or

(2) A person engaged in the offsite transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

155. "Universal waste transporter" means a person engaged in the offsite transportation of universal waste by air, rail, highway, or water.

156. "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

157. "Uppermost aquifer" means the natural geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

158. "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.

159. "Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

160. "Wastewater treatment unit" means a device which:

a. Is part of a wastewater treatment facility which is subject to regulation under either section 402 or 307(b) of the Clean Water Act;

b. Receives and treats or stores an influent wastewater which is a hazardous waste as identified in section 33.1-24-02-03, or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in section 33.1-24-02-03, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in section 33.1-24-02-03; and

c. Meets the definition of tank or tank system.

161. "Water (bulk shipment)" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

162. "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form and often walled with bricks or tubing to prevent the earth from caving in.

163. "Well injection". (See "underground injection".)

164. "Wipe" means a woven or nonwoven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

165. "Zone of engineering control" means an area under the control of the owner or operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-05. References.

1. When used in this article, the following publications are incorporated by reference. Copies may be inspected at the library, United States environmental protection agency, 1200 Pennsylvania Avenue NW (3403T), Washington, D.C. 20460, libraryhq@epa.gov; or at the national archives and records administration. For information on the availability of this material at the national archives and records administration, call 202-741-6030, or go to:

[http://www.archives.gov/federal register/code of federal regulations/ibr locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

2. The following materials are available for purchase from the American society for testing and materials, 100 Barr Harbor Drive, P. O. Box C700, West Conshohocken, Pennsylvania 19428-2959:

- a. ASTM D93-79 or D93-80, "Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester".

- b. ASTM D1946-82, "Standard Method for Analysis of Reformed Gas by Gas Chromatography".

- c. ASTM D2267-88, "Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography".

- d. ASTM D2382-83, "Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method)".

- e. ASTM D2879-92, "Standard Test Method for Vapor Pressure -Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope".

- f. ASTM D3278-78, "Standard Test Methods for Flash Point for Liquids by Setaflash Closed Tester".

- g. ASTM E168-88, "Standard Practices for General Techniques of Infrared Quantitative Analysis".

- h. ASTM E169-87, "Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis".

- i. ASTM E260-85, "Standard Practice for Packed Column Gas Chromatography".

- j. ASTM E926-88, "Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," Test Method C - Bomb, Acid Digestion Method.

- k. ASTM D6450-99, "Standard Test Method for Flash Point by Continuously Closed Cup Tester".

3. The following materials are available for purchase from the national technical information service, 5285 Port Royal Road, Springfield, Virginia 22161, 703-605-600 or 800-553-6847; or for purchase from the superintendent of documents, United States government printing office, Washington, D.C. 20402, 202-512-1800:

- a. "APTI Course 415: Control of Gaseous Emissions," environmental protection agency publication EPA-450/2-81-005, December 1981.

b. Method 1664, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Nonpolar Material) by Extraction and Gravimetry:

(1) Revision A, EPA-821-R-98-002, February 1999.

(2) Revision B, EA-821-R-10-001, February 2010.

c. The following methods as published in the test methods compendium known as "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," environmental protection agency publication SW-846, third edition. A suffix of "A" in the method number indicates revision one (the method has been revised once). A suffix of "B" in the method number indicates revision two (the method has been revised twice). A suffix of "C" in the method number indicates revision three (the method has been revised three times). A suffix of "D" in the method number indicates revision four (the method has been revised four times):

(1) Method 0010, dated September 1986 and in the Basic Manual.

(2) Method 0020, dated September 1986 and in the Basic Manual.

(3) Method 0030, dated September 1986 and in the Basic Manual.

(4) Method 1320, dated September 1986 and in the Basic Manual.

(5) Method 1311, dated September 1992 and in Update I.

(6) Method 1330A, dated September 1992 and in Update I.

(7) Method 1312 dated September 1994 and in Update III.

(8) Method 0011, dated December 1996 and in Update III.

(9) Method 0023A, dated December 1996 and in Update III.

(10) Method 0031, dated December 1996 and in Update III.

(11) Method 0040, dated December 1996 and in Update III.

(12) Method 0050, dated December 1996 and in Update III.

(13) Method 0051, dated December 1996 and in Update III.

(14) Method 0060, dated December 1996 and in Update III.

(15) Method 0061, dated December 1996 and in Update III.

(16) Method 9071B, dated April 1998 and in Update IIIA.

(17) Method 1010A, dated November 2004 and in Update IIIB.

(18) Method 1020B, dated November 2004 and in Update IIIB.

(19) Method 1110A, dated November 2004 and in Update IIIB.

(20) Method 1310B, dated November 2004 and in Update IIIB.

(21) Method 9010C, dated November 2004 and in Update IIIB.

(22) Method 9012B, dated November 2004 and in Update IIIB.

(23) Method 9040C, dated November 2004 and in Update IIIB.

(24) Method 9045D, dated November 2004 and in Update IIIB.

(25) Method 9060A, dated November 2004 and in Update IIIB.

(26) Method 9070A, dated November 2004 and in Update IIIB.

(27) Method 9095B, dated November 2004 and in Update IIIB.

4. The following materials are available for purchase from the national fire protection association, 1 Batterymarch Park, P. O. Box 9101, Quincy, Massachusetts 02269-9101:

a. "Flammable and Combustible Liquids Code" (1977 or 1981).

b. [Reserved]

5. The following materials are available for purchase from the American petroleum institute, 1220 L Street NW, Washington, D.C. 20005:

a. API publication 2517, Third edition, February 1989, "Evaporative Loss from External Floating - Roof Tanks".

b. [Reserved]

6. The following materials are available for purchase from the environmental protection agency, Research Triangle Park, North Carolina:

a. "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised", October 1992, environmental protection agency publication number EPA-450/R-92-019.

b. [Reserved]

7. The following materials are available for purchase from the organization for economic cooperation and development, Environment Direcorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France:

a. Organization for Economic Cooperation and Development Green List of Wastes (revised May 1994), Amber List of Wastes and Red List of Wastes (both revised May 1993) as set forth in appendix 3, appendix 4 and appendix 5, respectively, to the organization for economic cooperation and development council decision C(92)39/FINAL (concerning the control of transfrontier movements of wastes destined for recovery operations).

b. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-06. General rulemaking petitions.

1. Any person may petition the department to modify or revoke any provisions in chapters 33.1-24-01 through 33.1-24-05. This section sets forth general requirements which apply to all such petitions. Section 33.1-24-01-07 sets forth additional requirements for petitions to add a testing

or analytical method to chapter 33.1-24-02 or sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 or subsection 5 of section 33.1-24-06-16. Section 33.1-24-01-08 sets forth additional requirements for petitions to exclude a waste or waste-derived material at a particular facility from section 33.1-24-02-03 or the lists of hazardous wastes in sections 33.1-24-02-15 through 33.1-24-02-19. Section 33.1-24-01-08 sets forth additional requirements for petitions to amend sections 33.1-24-05-700 through 33.1-24-05-799 to include additional hazardous wastes or categories of hazardous waste as universal waste.

2. Each petition must be submitted to the department by certified mail and must include:

a. The petitioner's name and address;

b. A statement of the petitioner's interest in the proposed action;

c. A description of the proposed action, including (where appropriate) suggested regulatory language; and

d. A statement of the need and justification for the proposed action, including any supporting tests, studies, or other information.

3. The department will make a tentative decision to grant or deny a petition and will publish notice of such tentative decision.

4. Upon the written request of any interested person, the department may, at its discretion, hold an informal public hearing to consider oral comments on the tentative decision. A person requesting a hearing must state the issues to be raised and explain why written comments would not suffice to communicate the person's views. The department may, in any case, decide on its own motion to hold an informal public hearing.

5. After evaluating all public comments, the department will make a final decision.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-07. Petitions for equivalent testing or analytical methods.

1. Any person seeking to add a testing or analytical method to chapter 33.1-24-02 or 33.1-24-05 may petition for a regulatory amendment to this section and section 33.1-24-01-06. To be successful, the person must demonstrate to the satisfaction of the department that the proposed method is equal to or superior to the corresponding method prescribed in chapter 33.1-24-02 or 33.1-24-05, in terms of its sensitivity, accuracy, and precision, i.e., reproducibility.

2. Each petition must include, in addition to the information required by section 33.1-24-01-06:

a. A full description of the proposed method, including all procedural steps and equipment used in the method;

b. A description of the types of wastes or waste matrices for which the proposed method may be used;

c. Comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in chapter 33.1-24-02 or 33.1-24-05;

- d. An assessment of any factors which may interfere with, or limit the use of, the proposed method; and
- e. A description of the quality control procedures necessary to ensure the sensitivity, accuracy, and precision of the proposed method.
3. After receiving a petition for an equivalent method, the department may request any additional information of the proposed method which it may reasonably require to evaluate the method.
4. If the department amends the regulations to permit use of a new testing method, the method will be incorporated by reference in section 33.1-24-01-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-08. Petitions to amend chapter 33.1-24-02 to exclude a waste produced at a particular facility and amend chapter 33.1-24-05 to include additional hazardous waste or wastes as universal waste.

1. Any person seeking to exclude a waste at a particular generating facility from the lists in sections 33.1-24-02-15 through 33.1-24-02-19 may petition for a regulatory amendment under this section and section 33.1-24-01-06. To be successful:
 - a. The petitioner must demonstrate to the satisfaction of the department that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous or an acutely hazardous waste; and
 - b. Based on a complete application, the department must determine, where it has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of sections 33.1-24-02-10 through 33.1-24-02-14.
2. The procedures in this section and section 33.1-24-01-06 may also be used to petition the department for a regulatory amendment to exclude waste from paragraph 2 of subdivision b of subsection 1 of section 33.1-24-02-03 or subsection 3 of section 33.1-24-02-03, a waste which is described in these sections and is either a waste listed in sections 33.1-24-02-15 through 33.1-24-02-19, or is derived from a waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner must make the same demonstration as required by subsection 1. Where the waste is a mixture of solid waste and one or more listed hazardous wastes or is derived from one or more hazardous wastes, this demonstration must be made with respect to the waste mixture as a whole; analysis must be conducted for not only those constituents for which the listed waste contained in the mixture was listed as hazardous, but also for factors (including additional constituents) that could cause the waste mixture to be a hazardous waste. A waste which is so excluded may still be a hazardous waste by operation of sections 33.1-24-02-10 through 33.1-24-02-14.
3. If the waste is listed with codes "I", "C", "R", or "E" in sections 33.1-24-02-15 through 33.1-24-02-19:
 - a. The petitioner must show that the waste does not exhibit the relevant characteristics for which the waste was listed as defined in sections 33.1-24-02-11, 33.1-24-02-12, 33.1-

24-02-13, or 33.1-24-02-14 using any applicable methods prescribed therein. The petitioner also must show that the waste does not exhibit any of the other characteristics defined in sections 33.1-24-02-11, 33.1-24-02-12, 33.1-24-02-13, or 33.1-24-02-14 using any applicable methods prescribed therein.

b. Based on a complete application, the department must determine, where it has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of sections 33.1-24-02-10 through 33.1-24-02-14.

4. If the waste is listed with code "T" in sections 33.1-24-02-15 through 33.1-24-02-19:

a. The petitioner must demonstrate that the waste:

(1) Does not contain the constituent or constituents (as defined in appendix IV of chapter 33.1-24-02) that caused the department to list the waste; or

(2) Although containing one or more of the hazardous constituents (as defined in appendix IV of chapter 33.1-24-02) that caused the department to list the waste, does not meet the criterion of subdivision c of subsection 1 of section 33.1-24-02-09 when considering the factors used by the department in paragraphs 1 through 11 of subdivision c of subsection 1 of section 33.1-24-02-09 under which the waste was listed as hazardous; and

b. Based on a complete application, the department must determine where they have a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

c. The petitioner must demonstrate that the waste does not exhibit any characteristics defined in sections 33.1-24-02-11, 33.1-24-02-12, 33.1-24-02-13, and 33.1-24-02-14.

d. A waste which is so excluded, however, still may be a hazardous waste by operation of sections 33.1-24-02-10 through 33.1-24-02-14.

5. If the waste is listed with the code "H" in sections 33.1-24-02-15 through 33.1-24-02-19:

a. The petitioner must demonstrate that the waste does not meet the criterion of subdivision b of subsection 1 of section 33.1-24-02-09;

b. Based on a complete application, the department must determine where it has a reasonable basis to believe that additional factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

c. The petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in sections 33.1-24-02-11, 33.1-24-02-12, 33.1-24-02-13, and 33.1-24-02-14 using any applicable methods prescribed therein.

d. A waste which is so excluded, however, still may be a hazardous waste by operation of sections 33.1-24-02-10 through 33.1-24-02-14.

6. Reserved for listing radioactive wastes.

7. Reserved for listing infectious wastes.

8. Demonstration samples must consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.

9. Each petition must include, in addition to the information required by subsection 2 of section 33.1-24-01-06:

a. The name and address of the laboratory facility performing the sampling or tests of the wastes;

b. The names and qualifications of the persons sampling and testing the wastes;

c. The dates of sampling and testing;

d. The location of the generating facility;

e. A description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration;

f. A description of the waste and an estimate of average and maximum monthly and annual quantities of waste covered by the demonstration;

g. Pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste where the demonstration is based on the factors in subdivision c of subsection 1 of section 33.1-24-02-09;

h. A description of the methodologies and equipment used to obtain the representative sample;

i. A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, and preservation of the sample;

j. A description of the tests performed (including results);

k. The names and model numbers of the instruments used in performing the tests; and

l. The following statement signed by the generator of the waste or the generator's authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

10. After receiving a petition for an exclusion, the department may request any additional information which it may reasonably require to evaluate the petition.

11. An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to wastes from any other facility.

12. The department may exclude only part of the waste for which the demonstration is submitted if it has reason to believe that variability of the waste justifies a partial exclusion.

13. Any person seeking to add a hazardous waste or category of hazardous waste to the universal waste regulations of sections 33.1-24-05-700 through 33.1-24-05-799 may petition for a regulatory amendment under this subsection and sections 33.1-24-01-06, 33.1-24-05-760, and 33.1-24-05-761.
14. To be successful, the petitioner must demonstrate to the satisfaction of the department that regulation under the universal waste regulations of sections 33.1-24-05-700 through 33.1-24-05-799 is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must include the information required by subsection 2 of section 33.1-24-01-06. The petition should include as many of the factors listed in section 33.1-24-05-761 as are appropriate for the waste or category of waste addressed in the petition.
15. The department will grant or deny a petition using the factors listed in section 33.1-24-05-761. The decision will be based on the weight of evidence showing that regulation under sections 33.1-24-05-700 through 33.1-24-05-799 is appropriate for the waste or category of waste, will improve management for the waste or category of waste, and will improve implementation of the hazardous waste program.
16. The department may request additional information needed to evaluate the merits of the petition.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-09. Nonwaste determinations and variances from classification as a solid waste.

In accordance with the standards and criteria in sections 33.1-24-01-10 and 33.1-24-01-17 and the procedures in section 33.1-24-01-12, the department may determine on a case-by-case basis that the following recycled materials are not solid wastes:

1. Materials that are accumulated speculatively without sufficient amounts being recycled (as defined in subdivision h of subsection 3 of section 33.1-24-02-01);
2. Materials that are reclaimed and then reused within the original production process in which they were generated;
3. Materials that have been reclaimed but must be reclaimed further before the materials are completely recovered;
4. Hazardous secondary materials that are reclaimed in a continuous industrial process;
5. Hazardous secondary materials that are indistinguishable in all relevant aspects from a product or intermediate; and
6. Hazardous secondary materials that are transferred for reclamation under subdivision y of subsection 1 of section 33.1-24-02-04, and are managed at a verified reclamation facility or intermediate facility where the management of the hazardous secondary materials is not addressed under a hazardous waste permit or interim status standards.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-10. Standards and criteria for variances from classification as a solid waste.

1. The department may grant requests for a variance from classifying as a solid waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If a variance is granted, it is valid only for the following year, but can be renewed, on an annual basis, by filing a new application. The department's decision will be based on the following criteria:
 - a. The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur (for example, because of past practice, market factors, the nature of the material, or contractual arrangements for recycling);
 - b. The reason that the applicant has accumulated the material for one or more years without recycling seventy-five percent of the volume accumulated at the beginning of the year;
 - c. The quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled;
 - d. The extent to which the material is handled to minimize loss; and
 - e. Other relevant factors.
2. The department may grant requests for a variance from classifying as a solid waste those materials that are reclaimed and then reused as feed stock within the original production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:
 - a. How economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;
 - b. The extent to which the material is handled before reclamation to minimize loss;
 - c. The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;
 - d. The location of the reclamation operation in relation to the production process;
 - e. Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;
 - f. Whether the person who generates the material also reclaims it; and
 - g. Other relevant factors.
3. The department may grant requests for a variance from classifying as a solid waste those hazardous secondary materials that have been partially reclaimed, but must be reclaimed further before recovery is completed, if the partial reclamation has produced a commodity-like material. A determination that a partially-reclaimed material for which the variance is sought is commodity-like will be based on whether the hazardous secondary material is legitimately recycled as specified in section 33.1-24-01-19 and on whether all of the following decision criteria are satisfied:

- a. Whether the degree of partial reclamation the material has undergone is substantial as demonstrated by using a partial reclamation process other than the process that generated the hazardous waste;
- b. Whether the partially reclaimed material has sufficient economic value that it will be purchased for further reclamation;
- c. Whether the partially-reclaimed material is a viable substitute for a product or intermediate produced from virgin or raw materials which is used in subsequent production steps;
- d. Whether there is a market for the partially-reclaimed material as demonstrated by known customer or customers who are further reclaiming the material (for example, records of sales or contracts, or both, and evidence of subsequent use, such as bills of lading); and
- e. Whether the partially-reclaimed material is handled to minimize loss.

4. The department may grant requests for a variance from classifying as a solid waste those hazardous secondary materials that are transferred for reclamation under subdivision y of subsection 1 of section 33.1-24-02-04 and are managed at a verified reclamation facility or intermediate facility where the management of the hazardous secondary materials is not addressed under a hazardous waste permit or interim status standards. The department's decision will be based on the following criteria:

- a. The reclamation facility or intermediate facility must demonstrate that the reclamation process for the hazardous secondary materials is legitimate pursuant to section 33.1-24-01-19;
- b. The reclamation facility or intermediate facility must satisfy the financial assurance condition in subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04;
- c. The reclamation facility or intermediate facility must not be subject to a formal enforcement action in the previous three years and not be classified as a significant noncomplier under Resource Conservation and Recovery Act Subtitle C, or must provide credible evidence that the facility will manage the hazardous secondary materials properly. Credible evidence may include a demonstration that the facility has taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials;
- d. The intermediate or reclamation facility must have the equipment and trained personnel needed to safely manage the hazardous secondary material and must meet emergency preparedness and response requirements under sections 33.1-24-02-120 through 33.1-24-02-129;
- e. If residuals are generated from the reclamation of the excluded hazardous secondary materials, the reclamation facility must have the permits required (if any) to manage the residuals, have a contract with an appropriately permitted facility to dispose of the residuals or present credible evidence that the residuals will be managed in a manner that is protective of human health and the environment; and
- f. The intermediate or reclamation facility must address the potential for risk to proximate populations from unpermitted releases of the hazardous secondary material to the environment (for example, releases that are not covered by a permit, such as a permit to discharge to water or air), which may include potential releases through surface transport by precipitation runoff, releases to soil and groundwater, windblown dust, fugitive air

emissions, and catastrophic unit failures), and must include consideration of potential cumulate risks from other nearby potential stressors.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-11. Variance to be classified as a boiler.

In accordance with the standards and criteria in section 33.1-24-01-04 (definition of "boiler"), and the procedures in section 33.1-24-01-12, the department may determine on a case-by-case basis that certain enclosed devices using controlled flame combustion are boilers, even though they do not otherwise meet the definition of boiler contained in section 33.1-24-01-04, after considering the following criteria:

1. The extent to which the unit has provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases;
2. The extent to which the combustion chamber and energy recovery equipment are of integral design;
3. The efficiency of energy recovery, calculated in terms of the recovered energy compared with the thermal value of the fuel;
4. The extent to which exported energy is utilized;
5. The extent to which the device is in common and customary use as a "boiler" functioning primarily to produce a steam, heated fluids, or heated gases; and
6. Other factors, as appropriate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-12. Procedures for variances from classification as a solid waste, for variances to be classified as a boiler or for nonwaste determinations.

The department will use the following procedures in evaluating applications for variances from classification as a solid waste or applications to classify particular enclosed flame combustion devices as boilers or applications for nonwaste determinations:

1. The applicant must apply to the department for the variance or nonwaste determination. The application must address the relevant criteria contained in section 33.1-24-01-10, 33.1-24-01-11 or 33.1-24-01-17, as applicable.
2. The department will evaluate the application and issue a draft notice tentatively granting or denying the application. Notification of this tentative decision will be provided by newspaper advertisement or radio broadcast in the locality where the recycler is located. The department will accept comments on the tentative decision for thirty days, and may also hold a public hearing upon request or at the department's discretion. The department will issue a final decision after receipt of comments and after the hearing, if any.
3. In the event of a change in circumstances that affects how a hazardous secondary material meets the relevant criteria contained in section 33.1-24-01-10, 33.1-24-01-11, or 33.1-24-01-17 upon which a variance or nonwaste determination has been based, the applicant shall send a description of the change in circumstances to the department. The department may issue a

determination that the hazardous secondary material continues to meet the relevant criteria of the variance or nonwaste determination or may require the facility to reapply for the variance or nonwaste determination.

4. Variances and nonwaste determination are effective for a fixed term not to exceed ten years. No later than six months prior to the end of this term, facilities must reapply for a variance or nonwaste determination. If a facility reapplies for a variance or nonwaste determination within six months, the facility may continue to operate under an expired variance or nonwaste determination until receiving a decision on the facility's reapplication from the department.
5. Facilities receiving a variance or nonwaste determination must provide notification as required by section 33.1-24-01-18.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-13. Additional regulation of certain hazardous waste recycling activities on a case-by-case basis.

The department may decide on a case-by-case basis that persons accumulating or storing the recyclable materials described in paragraph 3 of subdivision b of subsection 1 of section 33.1-24-02-06 should be regulated under subsections 2 and 3 of section 33.1-24-02-06. The basis for this decision is that the materials are being accumulated or stored in a manner that does not protect human health and the environment because the materials or their toxic constituents have not been adequately contained, or because the materials being accumulated or stored together are incompatible. In making this decision, the department will consider the following factors:

1. The types of materials accumulated or stored and the amounts accumulated or stored;
2. The method of accumulation or storage;
3. The length of time the materials have been accumulated or stored before being reclaimed;
4. Whether any contaminants are being released into the environment or are likely to be so released; and
5. Other relevant factors. The procedures for this decision are set forth in section 33.1-24-01-14 of this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-14. Procedures for case-by-case regulation of hazardous waste recycling activities.

The department will use the following procedures when determining whether to regulate hazardous waste recycling activities described in paragraph 3 of subdivision b of subsection 1 of section 33.1-24-02-06 under the provisions of subsections 2 and 3 of section 33.1-24-02-06 rather than under the provisions of section 33.1-24-05-230:

1. If a generator is accumulating the waste, the department will issue a notice setting forth the factual basis for the decision and stating that the person must comply with the applicable requirements of chapter 33.1-24-03. The notice will become final within thirty days, unless the person served requests a public hearing to challenge the decision. Upon receiving such a

request, the department will hold a public meeting and will provide notice of the hearing to the public and allow public participation at the hearing. The department will issue a final order after the hearing stating whether or not compliance with chapter 33.1-24-03 is required. The order becomes effective thirty days after serving the decision unless the department specifies a later date or unless review by the department is requested. The order may be appealed to the department by any person who participated in the public hearing. The department may choose to grant or to deny the appeal. Final department action occurs when a final order is issued and department review procedures are exhausted.

2. If the person is accumulating the recyclable materials at a storage facility, the notice will state that the person must obtain a permit in accordance with all applicable provisions of chapters 33.1-24-06 and 33.1-24-07. The owner or operator of the facility must apply for a permit within no less than sixty days and no more than six months of notice, as specified in the notice. If the owner or operator of the facility wishes to challenge the department's decision, the owner or operator may do so in his or her permit application, in a public hearing held on the draft permit, or in comments filed on the draft permit, or on the notice of intent to deny the permit. The fact sheet accompanying the permit will specify the reasons for the department's determination. The question whether the department's decision was proper will remain open for consideration during the public comment period discussed under chapter 33.1-24-07 and in any subsequent hearing.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-15. Variances.

The department may, on a case-by-case basis, grant a variance from this article upon such conditions and within such time limitations as it may prescribe provided it is no less stringent than the federal regulations, 40 CFR parts 260 through 281.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-16. Availability of information.

All records related to this article not specifically protected by state or federal law must be made available to the public in accordance with the following provisions:

1. **Definitions.** For the purposes of this article:

- a. "Record" means any document, writing, photograph, sound or magnetic recording, drawing, or other similar thing by which information has been preserved, from which the information can be retrieved and copied, and which is, was, or is alleged to be possessed by the department. The term includes informal writings (such as drafts and the like) and also includes information preserved in a form which must be translated or deciphered by machine in order to be intelligible to humans. The term includes documents and the like which were created or acquired by the department, its predecessors, its officers, and its employees by use of state funds or in the course of transacting official business. However, the term does not include materials which are legally owned by a department officer or employee in that person's purely personal capacity. Nor does the term include materials published by nonstate organizations which are readily available to the public, such as books, journals, and periodicals available through reference libraries, even if such materials are in the department's possession.

b. "Request" means a request to inspect or obtain a copy of one or more records.

c. "Requester" means any person who has submitted a request to the department.

2. Requests to which this section applies.

a. This section applies to any written request received by the department whether or not it cites this availability of information section.

b. Any written request to the department for existing records prepared by the department for routine public distribution, for example, pamphlets, copies of speeches, press releases, and educational materials must be honored. No individual determination is necessary in such cases, since preparation of the records for routine public distribution itself constitutes a determination that the records are available to the public.

3. Requests which do not reasonably describe records sought. The department will make every reasonable effort to assist in the identification and description of records sought and to assist the requester in formulating a request. If a request is described in general terms (for example, all records having to do with a certain area), the department may communicate with the requester (by telephone when practicable) with a view toward reducing the administrative burden of processing a broad request and minimizing the fees payable by the requester. Such attempts will not be used as a means to discourage requests, but rather as a means to help identify more specifically the records actually sought.

4. Time allowed for issuance of initial determination.

a. Except as otherwise provided in this section, not later than the tenth working day after the date of receipt of a request for records, the department shall issue a written determination to the requester stating which of the requested records will, and which will not, be released and the reason for any denial of a request. If the records are not known to exist or are not in the department's possession, the department shall so inform the requester. To the extent requested records which are in the department's possession are published by the department, the response may inform the requester that the records are available for inspection and where copies can be obtained.

b. The period of ten working days must be measured from the date the request is first received and logged into the department.

c. There must be excluded from the period of ten working days (or any extension thereof) any time which elapses between the date that a requester is notified by the department that the person's request does not reasonably identify the records sought, and the date that the requester furnishes a reasonable identification.

d. There must be excluded from the period of ten working days (or any extension thereof) any time which elapses between the date that a requester is notified by the department that prepayment or assurance of payment of fees is required, and the date the requester pays (or makes suitable arrangements to pay) such charges.

e. The department may extend the basic ten-day period established under subdivision a by a period not to exceed ten additional working days, by furnishing written notice to the requester within the basic ten-day period, stating the reasons for such extension and a date by which the office expects to be able to issue a determination. The period may be so extended only when absolutely necessary, only for the period required, and only when one or more of the following unusual circumstances require the extension:

- (1) There is a need to search and collect the requested records from field facilities or other establishments that are separate from the office processing the request;
 - (2) There is a need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or
 - (3) There is a need for consultation, which must be conducted with all practicable speed, with another division having a substantial interest in the determination of the request.
- f. Failure of the department to issue a determination within the ten-day period or any authorized extension constitutes final department action which authorizes the requester to commence an action in an appropriate state district court to obtain the records.

5. Initial denials of requests.

- a. An initial denial of a request may be issued only for the following reasons:
- (1) The records requested are specifically protected by state or federal law; or
 - (2) The records are deemed enforcement-sensitive.
- b. Each initial determination which denies, in whole or in part, a request for one or more existing located records must state that the requester may appeal the initial denial by sending a written appeal to the department within thirty days of receipt of the determination.

6. Appeals from initial denials - Manner of making.

- a. Any person whose request for one or more existing, located department records has been denied, in whole or in part, by an initial determination may appeal that denial by addressing a written appeal to the department.
- b. An appeal should be mailed no later than thirty calendar days after the date the requester received the initial determination on the request. An untimely appeal may be treated either as a timely appeal or as a new request.
- c. The appeal letter must contain a reference to the subject line, the date of initial determination, and the name and address of the person who issued the initial denial. The appeal letter must also indicate which of the records to which access was denied are the subjects of the appeal.

7. Appeal determination - By whom made. The department's legal counsel shall make one of the following legal determinations in connection with an appeal from the initial denial of a request for an existing, located record:

- a. The record must be disclosed;
- b. The record must not be disclosed because a statute or a provision of this section so requires; or
- c. The record is exempt from mandatory disclosure but legally may be disclosed as a matter of department discretion.

8. Contents of determination denying appeal. A determination denying an appeal from an initial denial must be in writing, must state which of the exemptions apply to each requested existing record, and must state the reasons for denial of the appeal. A denial determination must also state the name and position of the department employee who directed that the appeal be denied. Such a determination must further state that the person whose request was denied may

obtain de novo judicial review of the denial by complaint filed with the district court of the United States in the district in which the complainant resides, or in which the department's records are located. However, no determination denying an appeal may reveal the existence or nonexistence of records if identifying the mere fact of the existence or nonexistence of those records would reveal confidential business information, confidential personal information, or a confidential investigation. Instead of identifying the existence or nonexistence of the records, the determination must state that the appeal is denied because either the records do not exist or they are exempt from mandatory disclosure.

9. Time allowed for issuance of appeal determination.

a. Except as otherwise provided in this section, not later than the twentieth working day after the date of receipt of the informational request of an appeal from an initial denial of a request for records, the department's legal counsel shall issue a written determination stating which of the requested records (as to which an appeal was made) shall be disclosed and which shall not be disclosed.

b. The period of twenty working days must be measured from the date an appeal is first received by the department.

c. The department's legal counsel may extend the basic twenty-day period established under subdivision a by a period not to exceed ten additional working days, by furnishing written notice to the requester within the basic twenty-day period stating the reason for such extension and the date by which the office expects to be able to issue a determination. The period may be so extended only when absolutely necessary, only for the period required, and only when one or more of the following unusual circumstances require the extension:

(1) There is a need to search for and collect the records from field facilities or other establishments that are separate from the office processing the appeal;

(2) There is need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or

(3) There is a need for consultation, which must be conducted with all practicable speed, with another division having a substantial interest in the determination of the request.

d. No extension of the twenty-day period shall be issued under subdivision c which would cause the total of all such extensions to exceed ten working days.

10. Failure to decide on appeal by deadline. Failure to decide if an appealed record must be disclosed by the deadline imposed in this section constitutes final agency action and the requester's right to judicial review.

11. Fees - Payments - Waiver.

a. Fees will be charged requesters for searching for and producing requested records in accordance with department policy.

b. Reduction or waiver of fee. The fee chargeable under department policy must be reduced or waived by the department if the department determines that a waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public. Reduction or waiver of fees must be considered (need not necessarily be granted) in connection with each request from a representative of the press or other communications medium or from a public interest group.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-17. Standards and criteria for nonwaste determinations.

1. An applicant may apply to the department for a formal determination that a hazardous secondary material is not discarded and therefore not a solid waste. The determinations will be based on the criteria contained in subsections 2 or 3, as applicable. If an application is denied, the hazardous secondary material might still be eligible for a solid waste variance or exclusion (for example, one of the solid waste variances under section 33.1-24-01-10).
2. The department may grant a nonwaste determination for hazardous secondary material which is reclaimed in a continuous industrial process if the applicant demonstrates that the hazardous secondary material is a part of the production process and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in section 33.1-24-01-19, and on the following criteria:
 - a. The extent that the management of the hazardous secondary material is part of the continuous primary production process and is not waste treatment;
 - b. Whether the capacity of the production process would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned (for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements);
 - c. Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water, or land at significantly higher levels from either a statistical, or from a health and environmental risk perspective than would otherwise be released by the production process; and
 - d. Other relevant factors that demonstrate the hazardous secondary material is not discarded including why the hazardous secondary material cannot meet, or should not have to meet, the conditions of an exclusion under section 33.1-24-02-02 or 33.1-24-02-04.
3. The department may grant a nonwaste determination for hazardous secondary material which is indistinguishable in all relevant aspects from a product or intermediate if the applicant demonstrates that the hazardous secondary material is comparable to a product or intermediate and is not discarded. The determination will be based on whether the hazardous secondary material is legitimately recycled as specified in section 33.1-24-01-19, and on the following criteria:
 - a. Whether market participants treat the hazardous secondary material as a product or intermediate rather than a waste (for example, based on the current positive value of the hazardous secondary material, stability of demand, or any contractual arrangements);
 - b. Whether the chemical and physical identity of the hazardous secondary material is comparable to commercial products or intermediates;
 - c. Whether the capacity of the market would use the hazardous secondary material in a reasonable time frame and ensure that the hazardous secondary material will not be abandoned (for example, based on past practices, market factors, the nature of the hazardous secondary material, or any contractual arrangements);
 - d. Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than released to the air, water, or land at significantly higher levels from either a

statistical, or from a health and environmental risk perspective than would otherwise be released by the production process; and

- e. Other relevant factors that demonstrate the hazardous secondary material is not discarded, including why the hazardous secondary material cannot meet, or should not have to meet, the conditions of an exclusion under section 33.1-24-02-02 or 33.1-24-02-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-18. Notification requirements for hazardous secondary materials.

1. Facilities managing hazardous secondary materials under section 33.1-24-01-09, subdivision x, y, or z of subsection 1 of section 33.1-24-02-04, must send a notification prior to operating under the regulatory provision and by March first of each even numbered year thereafter, to the department using department-approved forms that include the following information:

- a. The name, address, and identification number (if applicable) of the facility;
- b. The name and telephone number of a contact person;
- c. The North American industry classification system code of the facility;
- d. The regulation under which the hazardous secondary materials will be managed;
- e. When the facility began or expects to begin managing the hazardous secondary materials in accordance with the regulation;
- f. A list of hazardous secondary materials that will be managed according to the regulation (reported as the hazardous waste numbers that would apply if the hazardous secondary materials were managed as hazardous wastes);
- g. For each hazardous secondary material, whether the hazardous secondary material, or any portion thereof, will be managed in a land-based unit;
- h. The quantity of each hazardous secondary material to be managed annually; and
- i. The certification (included in the department-approved form) signed and dated by an authorized representative of the facility.

2. If a facility managing hazardous secondary materials has submitted a notification, but then subsequently stops managing hazardous secondary materials in accordance with the regulation or regulations listed above, the facility shall notify the department within thirty days using a department-approved form. For purposes of this section, a facility has stopped managing hazardous secondary materials if the facility no longer generates, manages or reclaims, or any combination, hazardous secondary materials under the regulation or regulations above and does not expect to manage any amount of hazardous secondary materials for at least one year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-01-19. Legitimate recycling of hazardous secondary materials.

1. Recycling of hazardous secondary materials for the purpose of the exclusions or exemptions from the hazardous waste rules must be legitimate. Hazardous secondary material that is not

legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons must address all the requirements of this subsection.

a. Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process. The hazardous secondary material provides a useful contribution if it:

- (1) Contributes valuable ingredients to a product or intermediate;
- (2) Replaces a catalyst or carrier in the recycling process;
- (3) Is the source of a valuable constituent recovered in the recycling process;
- (4) Is recovered or regenerated by the recycling process; or
- (5) Is used as an effective substitute for a commercial product.

b. The recycling process must produce a valuable product or intermediate. The product or intermediate is valuable if it is:

- (1) Sold to a third party; or
- (2) Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.

c. The generator and the recycler shall manage the hazardous secondary material as a valuable commodity when the hazardous secondary material is under the generator's or recycler's control. Where there is an analogous raw material, the hazardous secondary material must be managed, at a minimum, in a manner consistent with the management of the raw material or in an equally protective manner. Where there is no analogous raw material, the hazardous secondary material must be contained. Hazardous secondary materials that are released to the environment and are not recovered immediately are discarded.

d. The product of the recycling process must be comparable to a legitimate product or intermediate:

(1) Where there is an analogous product or intermediate, the product of the recycling process is comparable to a legitimate product or intermediate if:

(a) The product of the recycling process does not exhibit a hazardous characteristic (as defined in sections 33.1-24-02-10 through 33.1-24-02-14) that analogous products do not exhibit, and

(b) The concentrations of any hazardous constituents found in Appendix V of chapter 33.1-24-02 which are in the product or intermediate are at levels that are comparable to or lower than those found in analogous products or at levels that meet widely recognized commodity standards and specifications, in the case where the commodity standards and specifications include levels that specifically address those hazardous constituents.

(2) Where there is no analogous product, the product of the recycling process is comparable to a legitimate product or intermediate if:

(a) The product of the recycling process is a commodity that meets widely recognized commodity standards and specifications (for example, commodity specifications grades for common metals), or

(b) The hazardous secondary materials being recycled are returned to the original process or processes from which they were generated to be reused (for example, closed loop recycling).

(3) If the product of the recycling process has levels of hazardous constituents which are not comparable to or unable to be compared to a legitimate product or intermediate per paragraph 1 or 2, the recycling still may be shown to be legitimate, if it meets the following specified requirements. The person performing the recycling shall conduct the necessary assessment and prepare documentation showing why the recycling is, in fact, still legitimate. The recycling can be shown to be legitimate based on lack of exposure from toxics in the product, lack of the bioavailability of the toxics in the product, or other relevant considerations that show the recycled product does not contain levels of hazardous constituents which pose a significant human health or environmental risk. The documentation must include a certification statement that the recycling is legitimate and must be maintained onsite for three years after the recycling operation has ceased. The person performing the recycling shall notify the department of this activity using a department-approved form.

2. [Reserved]

3. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

CHAPTER 33.1-24-02
IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

Section

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33.1-24-02-01. Purpose and scope.

1. This chapter identifies those solid wastes which are subject to regulation as hazardous wastes and which are subject to the notification requirements. In this chapter:
 - a. Sections 33.1-24-02-01 through 33.1-24-02-07 define the terms "solid waste" and "hazardous waste", identify those wastes which were excluded from regulation under chapters 33.1-24-03 through 33.1-24-07, and establish special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.
 - b. Sections 33.1-24-02-08 and 33.1-24-02-09 set forth the criteria used to identify characteristics of hazardous waste and to list particular hazardous waste.
 - c. Sections 33.1-24-02-10 through 33.1-24-02-14 identify characteristics of hazardous waste.
 - d. Sections 33.1-24-02-15 through 33.1-24-02-19 list particular hazardous wastes.
2. The definition of solid waste contained in this chapter:
 - a. Applies only to wastes that also are hazardous for purposes of the rules implementing North Dakota Century Code chapter 23.1-04. For example, it does not apply to materials (such as nonhazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recyclable.
 - b. This chapter identifies only some of the materials which are solid wastes and hazardous wastes under North Dakota Century Code chapter 23.1-04. A material which is not defined as a solid waste in this chapter or is not a hazardous waste identified or listed in this chapter, is still a solid waste and a hazardous waste for purposes of these sections if:
 - (1) In the case of North Dakota Century Code section 23.1-04-12, the department has reason to believe that the material may be a hazardous waste within the meaning of subsection 6 of North Dakota Century Code section 23.1-04-02; or

(2) In the case of North Dakota Century Code section 23.1-04-14, the statutory elements are established.

3. For the purpose of sections 33.1-24-02-02 and 33.1-24-02-06:

a. A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

b. "Sludge" has the same meaning used in section 33.1-24-01-04.

c. A "byproduct" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residue, such as slags or distillation column bottoms. The term does not include a coproduct that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

d. A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents. In addition, for purposes of subdivisions x and y of subsection 1 of section 33.1-24-02-04, smelting, melting and refining furnaces are considered to be solely engaged in metals reclamation if the metal recovery from the hazardous secondary materials meets the same requirements as those specified for metals recovery from hazardous waste found in subdivisions a through c of subsection 4 of section 33.1-24-05-525, and if the residuals meet the requirements specified in section 33.1-24-05-537.

e. A material is "used or reused" if it is either:

(1) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal containing secondary materials); or

(2) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner or in wastewater treatment).

f. "Scrap metal" is bits and pieces of metal parts (for example, bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (for example, radiators, scrap automobiles, railroad boxcars), which when worn or superfluous can be recycled.

g. A material is "recycled" if it is used, reused, or reclaimed.

h. A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that during the calendar year (commencing on January first) the amount of material that is recycled, or transferred to a different site for recycling, equals at least seventy-five percent by weight or volume of the amount of that material accumulated at the beginning of the period. Materials must be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period must be documented through an inventory log or other appropriate method. In calculating the percentage of turnover, the seventy-five percent requirement is to be applied to each material of the same type (for example, slags

from a single smelting process) that is recycled in the same way (for example, from which the same material is recovered or that is used in the same way). Material accumulating in units that would be exempt from regulation under subsection 3 of section 33.1-24-02-04 are not to be included in making the calculation. Materials that are already defined as solid wastes also are not to be included in making the calculation. Materials are no longer in this category once they are removed from accumulation for recycling, however.

- i. "Excluded scrap metal" is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.
- j. "Home scrap metal" is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.
- k. "Processed scrap metal" is scrap metal which has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (for example, sorted), and fines, drosses, and related materials which have been agglomerated. (Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (subdivision n of subsection 1 of section 33.1-24-02-04)).
- l. "Prompt scrap metal" is scrap metal as generated by the metal working and fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap metal is also known as industrial or new scrap metal.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-02. Definition of solid waste.

- 1. A solid waste is:
 - a. Any discarded material that is not excluded by subsection 1 of section 33.1-24-02-04 or that is not excluded by variance granted under sections 33.1-24-01-09 and 33.1-24-01-10 or that is not excluded by a nonwaste determination under sections 33.1-24-01-09 and 33.1-24-01-17.
 - b. A discarded material is any material which is:
 - (1) Abandoned, as explained in subsection 2;
 - (2) Recycled, as explained in subsection 3;
 - (3) Considered inherently wastelike, as explained in subsection 4; or
 - (4) A military munition identified as a solid waste in section 33.1-24-05-822.
- 2. Materials are solid wastes if they are abandoned by being:
 - a. Disposed of;
 - b. Burned or incinerated;

- c. Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated; or
 - d. Sham recycled, as explained in subsection 7.
- 3. Materials are solid wastes if they are recycled or accumulated, stored, or treated before recycling as specified in subdivisions a through d.
 - a. Used in a manner constituting disposal.
 - (1) Materials noted with a "*" in column 1 of table 1 are solid wastes when they are:
 - (a) Applied to or placed on the land in a manner that constitutes disposal; or
 - (b) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which case the product itself remains a solid waste).
 - (2) However, commercial chemical products listed in section 33.1-24-02-18 are not solid wastes if they are applied to the land and that is their ordinary manner of use.
 - b. Burning for energy recovery.
 - (1) Materials noted with a "*" in column 2 of table 1 are solid wastes when they are:
 - (a) Burned to recover energy; or
 - (b) Used to produce a fuel or are otherwise contained in fuels (in which case the fuel itself remains a solid waste).
 - (2) However, commercial chemical products listed in section 33.1-24-02-18 are not solid wastes if they are themselves fuels.
 - c. Reclaimed. Materials noted with a "*" in column 3 of table 1 are solid wastes when reclaimed unless they meet the requirements of subdivision q, x, y, or z of subsection 1 of section 33.1-24-02-04. Materials noted with a "-" in column 3 of table 1 are not solid wastes when reclaimed.
 - d. Accumulated speculatively. Materials noted with a "*" in column 4 of table 1 are solid wastes when accumulated speculatively.
- 4. Inherently wastelike materials. The following materials are solid wastes when they are recycled in any manner:
 - a. Hazardous waste numbers F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.
 - b. Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in sections 33.1-24-02-10 through 33.1-24-02-19, except for brominated material that meets the following criteria:
 - (1) The material must contain a bromine concentration of at least forty-five percent;
 - (2) The material must contain less than a total of one percent of toxic organic compounds listed in appendix V; and

(3) The material is processed continually onsite in the halogen acid furnace via direct conveyance (hard piping).

c. The department will use the following criteria to add wastes to that list:

(1) The materials:

(a) Are ordinarily disposed of, burned, or incinerated; or

(b) Contain toxic constituents listed in appendix V and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(2) The material may pose a substantial hazard to human health and the environment when recycled.

5. Materials that are not solid waste when recycled:

a. Materials are not solid waste when they can be shown to be legitimately recycled as specified in section 33.1-24-01-19 by being:

(1) Used or reused as ingredients in an industrial process to make a product provided the materials are not being reclaimed;

(2) Used or reused as effective substitutes for commercial products; or

(3) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. If the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land. If the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at subdivision q of subsection 1 of section 33.1-24-02-04 apply rather than this subsection.

b. The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs 1 through 3 of subdivision a):

(1) Materials used in a manner constituting disposal, or used to produce products that are applied to the land;

(2) Materials burned for energy recovery, used to produce a fuel, or contained in fuels;

(3) Materials accumulated speculatively; or

(4) Materials listed in subdivisions a and b of subsection 4.

6. Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing North Dakota Century Code chapter 23.1-04 who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from the regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

7. Sham recycling. A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in section 33.1-24-01-19.

TABLE 1				
	<u>Use Constituting Disposal (Subdivision a of Subsection 3 of Section 33.1-24-02-02)</u> (1)	<u>Energy Recovery/Fuel (Subdivision b of Subsection 3 of Section 33.1-24-02-02)</u> (2)	<u>Reclamation (Subdivision c of Subsection 3 of Section 33.1-24-02-02¹⁾</u> (3)	<u>Speculative Accumulation (Subdivision d of Subsection 3 of Section 33.1-24-02-02)</u> (4)
Spent materials	(*)	(*)	(*)	(*)
Sludges (listed in Section 33.1-24-02-16 or Section 33.1-24-02-17 of Chapter 33.1-24-02)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Byproducts (listed in Section 33.1-24-02-16 or Section 33.1-24-02-17 of Chapter 33.1-24-02)	(*)	(*)	(*)	(*)
Byproducts exhibiting a characteristic of hazardous waste	(*)	(*)	-	(*)
Commercial chemical products (listed in Section 33.1-24-02-18 of Chapter 33.1-24-02)	(*)	(*)	-	-
Scrap metal that is not excluded under subdivision m of subsection 1 of Section 33.1-24-02-04	(*)	(*)	(*)	(*)

¹Except as provided by Subdivision q, x, y, or z of Subsection 1 of Section 33.1-24-02-04 .
 Note - The terms "spent materials", "sludges", "byproducts", "scrap metal", and "processed scrap metal" are defined in Section 33.1-24-02-01.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-03. Definition of hazardous waste.

1. A solid waste, as defined in section 33.1-24-02-02, is a hazardous waste if:
- a. It is not excluded from regulation as a hazardous waste under subsection 2 of section 33.1-24-02-04; and
 - b. It meets any of the following criteria:
 - (1) It exhibits any of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under subdivision g of subsection 2 of section 33.1-24-02-04 and any other solid waste exhibiting a characteristic of hazardous waste under sections 33.1-24-02-10 through 33.1-24-02-14 is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred or

if it continues to exhibit any of the characteristics exhibited by the nonexcluded wastes prior to mixture. Further, for the purposes of applying the toxicity characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table 1 to section 33.1-24-02-14 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to the mixture.

(2) It is listed in sections 33.1-24-02-15 through 33.1-24-02-19 and has not been excluded from the lists in sections 33.1-24-02-15 through 33.1-24-02-19 by petitioning the department under sections 33.1-24-01-06 and 33.1-24-01-08.

(3) [Reserved]

(4) It is a mixture of solid waste and one or more hazardous wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19 and has not been excluded from this subdivision under sections 33.1-24-01-06 and 33.1-24-01-08, or subsection 7 or 8; however, the following mixtures of solid wastes and hazardous wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19 are not hazardous wastes (except by application of paragraph 1 or 2) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under subsections 18 and 19, or subsection 25 of North Dakota Century Code section 61-28-04 (including wastewater at the facilities which have eliminated the discharge of wastewater) and:

(a) One or more of the following spent solvents listed in section 33.1-24-02-16 - benzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene or the scrubber waters derived from the combustion of these spent solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed one part per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act, as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed one part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption must use an aerated biological wastewater treatment system and must use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels must file a copy of the facility's sampling and analysis plan with the department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the department. The department may reject the sampling and analysis plan if the department finds that, the sampling and analysis plan fails to include the above information, or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the sampling and analysis plan or if the department finds that the facility is not following the sampling and analysis plan,

the department shall notify the facility to cease the use of the direct monitoring option until such time as the basis for rejection are corrected;

(b) One or more of the following spent solvents listed in section 33.1-24-02-16 - methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived from the combustion of these spent solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed twenty-five parts per million, or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed twenty-five parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of the facility's sampling and analysis plan with the department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the department. The department may reject the sampling and analysis plan if the department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the sampling and analysis plan or if the department finds that the facility is not following the sampling and analysis plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the basis for rejection are corrected;

(c) One of the following wastes listed in section 33.1-24-02-17, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation - heat exchanger bundle cleaning sludge from the petroleum refining industry (hazardous waste number K050), crude oil storage tank sediment from petroleum refining operations (hazardous waste number K169), clarified slurry oil tank sediment or in-line filter/separation solids, or both, from petroleum refining operations (hazardous waste number K170), spent hydrotreating catalyst (hazardous waste number K171), and spent hydrorefining catalyst (hazardous waste number K172);

(d) A discarded hazardous waste, chemical commercial product, or chemical intermediate listed in sections 33.1-24-02-16 through 33.1-24-02-18, arising from de minimis losses of these materials. For purposes of this subparagraph, "de minimis" losses are inadvertent releases to a wastewater treatment system, including those from normal material handling operations, (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves, or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and

rinsate from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in sections 33.1-24-02-16 through 33.1-24-02-17, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19 must either have eliminated the discharge of wastewaters or have included in the facility's clean water act permit application or submission to the facility's pretreatment control authority the constituents for which each waste was listed (in chapter 33.1-24-02 appendix IV); and the constituents in the table "treatment standards for hazardous wastes" in section 33.1-24-05-280 for which each waste has a treatment standard (for example, land disposal restriction constituents). A facility is eligible to claim the exemption once the permit writer or control authority has been notified of possible de minimis releases via the Clean Water Act permit application or the pretreatment control authority submission. A copy of the clean water permit application or the submission to the pretreatment control authority must be placed in the facility's onsite files;

(e) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation;

(f) One or more of the following wastes listed in section 33.1-24-02-17 - wastewaters from the production of carbamates and carbamoyl oximes (hazardous waste number K157) - provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, for example, what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilution into the headworks of the facility's wastewater treatment system does not exceed a total of five parts per million by weight or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed five parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file copy of the facility's sampling and analysis plan with the department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the department. The department may reject the sampling and analysis plan if the department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the sampling and analysis plan or if the department finds that the facility is not

following the sampling and analysis plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the basis for rejection are corrected; or

(g) Wastewaters derived from the treatment of one or more of the following wastes listed in section 33.1-24-02-17 - organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (hazardous waste number K156) - provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of five milligrams per liter or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed five milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of the facility's sampling and analysis plan with the department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once the facility receives confirmation that the sampling and analysis plan has been received by the department. The department may reject the sampling and analysis plan if the department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the sampling and analysis plan or if the department finds that the facility is not following the sampling and analysis plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the basis for rejection are corrected.

(5) Rebuttable presumption for used oil. Used oil containing more than one thousand parts per million total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33.1-24-02).

(a) The rebuttable presumption does not apply to metalworking oils or fluids, or both, containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils or fluids, or both. The presumption does apply to metalworking oils or fluids, or both, if such oils or fluids, or both, are recycled in any other manner, or disposed.

(b) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

2. A solid waste which is not excluded from regulation under subdivision a of subsection 1 becomes a hazardous waste when any of the following events occur:

a. In the case of a waste listed in this chapter, when the waste first meets the listing description set forth in sections 33.1-24-02-15 through 33.1-24-02-19.

b. In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 is first added to the solid waste.

c. In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14.

3. Unless and until it meets the criteria of subsection 4:

a. A hazardous waste will remain a hazardous waste.

b. Except as otherwise provided in paragraph 2:

(1) Except as otherwise provided in paragraph 2, or subsection 7 or 8, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation runoff) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(2) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(a) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (standard industrial codes 331 and 332).

(b) Wastes from burning any of the materials exempted from regulation by paragraphs 3 and 4 of subdivision c of subsection 1 of section 33.1-24-02-06.

(c) Nonwastewater residue.

[1] Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062, or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in the definition for "industrial furnace" in section 33.1-24-01-04), that are disposed in solid waste management units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly or when the process or operation generating the waste changes or both. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

<u>Constituent</u>	<u>Maximum for Any Single Composite Sample - Toxicity Characteristic Leaching Procedure (mg/l)</u>
<u>Generic exclusion levels for K061 and K062 nonwastewater high temperature metals recovery residues</u>	
<u>Antimony</u>	<u>0.10</u>
<u>Arsenic</u>	<u>0.50</u>
<u>Barium</u>	<u>7.6</u>
<u>Beryllium</u>	<u>0.010</u>
<u>Cadmium</u>	<u>0.050</u>
<u>Chromium (total)</u>	<u>0.33</u>
<u>Lead</u>	<u>0.15</u>
<u>Mercury</u>	<u>0.009</u>
<u>Nickel</u>	<u>1.0</u>
<u>Selenium</u>	<u>0.16</u>
<u>Silver</u>	<u>0.30</u>
<u>Thallium</u>	<u>0.020</u>
<u>Zinc</u>	<u>70</u>
<u>Generic exclusion levels for F006 nonwastewater high temperature metals recovery residues</u>	
<u>Antimony</u>	<u>0.10</u>
<u>Arsenic</u>	<u>0.50</u>
<u>Barium</u>	<u>7.6</u>
<u>Beryllium</u>	<u>0.010</u>
<u>Cadmium</u>	<u>0.050</u>
<u>Chromium (total)</u>	<u>0.33</u>
<u>Cyanide (total) (mg/kg)</u>	<u>1.8</u>
<u>Lead</u>	<u>0.15</u>
<u>Mercury</u>	<u>0.009</u>
<u>Nickel</u>	<u>1.0</u>
<u>Selenium</u>	<u>0.16</u>
<u>Silver</u>	<u>0.30</u>
<u>Thallium</u>	<u>0.020</u>
<u>Zinc</u>	<u>70</u>

[2] A one-time notification and certification must be placed in the facility's files and sent to the department for K061, K062, or F006 high temperatures metal recovery residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to solid waste management units. The notification and certification that is placed in

the generators or treaters files must be updated if the process or operation generating the waste changes or if the solid waste management unit receiving the waste changes. However, the generator or treater need only notify the department on an annual basis if such changes occur. Such notification and certification should be sent to the department by the end of the calendar year, but no later than December thirty-first. The notification must include the following information: the name and address of the solid waste management unit receiving the waste shipments; the hazardous waste numbers and treatability groups at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(d) Biological treatment sludge from the treatment of one of the following wastes listed in section 33.1-24-02-17 organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (hazardous waste number K156), and wastewaters from the production of carbamates and carbamoyl oximes (hazardous waste number K157).

(e) Catalyst inert support media separated from one of the following wastes listed in section 33.1-24-02-17 spent hydrotreating catalyst (hazardous waste number K171), and spent hydrorefining catalyst (hazardous waste number K172).

4. Any solid waste described in subsection 3 is not a hazardous waste if it meets the following criteria:

a. In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of sections 33.1-24-05-250 through 33.1-24-05-299, even if they no longer exhibit a characteristic at the point of land disposal.); or

b. In the case of a waste which is a listed waste in sections 33.1-24-02-15 through 33.1-24-02-19, contains a waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 or is derived from a waste listed in sections 33.1-24-02-15 through 33.1-24-02-19, it also has been excluded from subsection 3 under sections 33.1-24-01-06 and 33.1-24-01-08.

5. Notwithstanding subsections 1 through 4 and provided the debris as defined in sections 33.1-24-05-250 through 33.1-24-05-299 does not exhibit a characteristic identified at sections 33.1-24-02-10 through 33.1-24-02-14, the following materials are not subject to regulation under chapters 33.1-24-01 through 33.1-24-04, 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, or 33.1-24-05-800 through 33.1-24-05-929:

a. Hazardous debris as defined in sections 33.1-24-05-250 through 33.1-24-05-299 that has been treated using one of the required extraction or destruction technologies specified in table 1 of section 33.1-24-05-285; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

b. Debris as defined in sections 33.1-24-05-250 through 33.1-24-05-299 that the department, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

6. [Reserved]

7. A hazardous waste that is listed in sections 33.1-24-02-15 through 33.1-24-02-19 solely because it exhibits one or more characteristics of ignitability as defined under section 33.1-24-02-11, corrosivity as defined under section 33.1-24-02-12, or reactivity as defined under section 33.1-24-02-13 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14.

a. The exclusion described in this subsection also pertains to:

(1) Any mixture of a solid waste and a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph 4 of subdivision b of subsection 1; and

(2) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph 1 of subdivision b of subsection 3.

b. Wastes excluded under this subsection are subject to the land disposal restrictions in sections 33.1-24-05-250 through 33.1-24-05-299, as applicable, even if the wastes no longer exhibit a characteristic at the point of land disposal.

c. Any mixture of a solid waste excluded from regulation under subdivision g of subsection 2 of section 33.1-24-02-04 and a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph 4 of subdivision b of subsection 1 is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14 for which the hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 was listed.

8. Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of sections 33.1-24-05-850 through 33.1-24-05-929 "eligible radioactive mixed waste".

a. The exemption described in this subsection also pertains to:

(1) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(2) Any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.

b. Waste exempted under this subsection must meet the eligibility criteria and specified conditions in sections 33.1-24-05-856 and 33.1-24-05-857, for storage and treatment, and in sections 33.1-24-05-890 and 33.1-24-05-895, for transportation and disposal. Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-04. Exclusions.

1. **Materials that are not solid wastes.** The following materials are not solid wastes for the purpose of this chapter:
 - a. Domestic sewage and any mixture of domestic sewage and other wastes that pass through a sewer system to a publicly owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.
 - b. Industrial wastewater discharges that are point source discharges subject to regulation under subsections 18 and 19 of North Dakota Century Code section 61-28-04. (Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored, or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.)
 - c. Irrigation return flows.
 - d. Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended [42 U.S.C. 2011 et seq.].
 - e. Materials subjected to in situ mining techniques which are not removed from the ground as part of the extraction process.
 - f. Pulping liquors (for example, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in subsection 3 of section 33.1-24-02-01.
 - g. Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in subsection 3 of section 33.1-24-02-01.
 - h. Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:
 - (1) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;
 - (2) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);
 - (3) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and
 - (4) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.
 - i. Wood preserving:
 - (1) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and
 - (2) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.
 - (3) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs 1 and 2, so long as they meet all of the following conditions:

- (a) The wood preserving wastewaters and spent wood preserving solutions are reused onsite at waterborne plants in the production process for their original intended purpose;
- (b) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or ground water or both;
- (c) Any unit used to manage wastewaters and spent wood preserving solutions, or both, prior to reuse can be visually or otherwise determined to prevent such releases;
- (d) Any drip pad used to manage the wastewaters and spent wood preserving solutions, or both, prior to reuse complies with the applicable standards in subsection 5 of section 33.1-24-06-16, regardless of whether the plant generates a total of less than one hundred kilograms per month of hazardous waste; and
- (e) Prior to operating pursuant to this exclusion, the plant owner or operator prepares a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language:

"I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation."

The plant must maintain a copy of that document in its onsite records until closure of the facility. The exclusion applies only so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the department for reinstatement. The department may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that violations are not likely to recur.

- j. Hazardous waste numbers K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke byproducts processes that are hazardous only because they exhibit the toxicity characteristic specified in section 33.1-24-02-14 when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar.

- k. Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

l. Materials considered:

- (1) Oil-bearing hazardous secondary materials (for example, sludges, byproducts, or spent materials) that are generated at a petroleum refinery (standard industrial code 2911) and are inserted into the petroleum refining process (standard industrial code 2911 - including, but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units (for example, cokers)) unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into

thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in paragraph 2, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (for example, from sources other than petroleum refineries) are not excluded under this paragraph. Residuals generated from processing or recycling materials excluded under this paragraph, where such materials as generated would have otherwise met a listing under sections 33.1-24-02-15 through 33.1-24-02-19, are designated as F037 listed wastes when disposed or intended for disposal.

(2) Recovered oil that is recycled in the same manner and with the same conditions as described in paragraph 1. Recovered oil is oil that has been reclaimed from secondary materials, including wastewater, generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (standard industrial codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include used oil as defined in section 33.1-24-05-600.

m. Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.

n. Shredded circuit boards being recycled provided that they are:

(1) Stored in containers sufficient to prevent a release to the environment prior to recovery; and

(2) Free of mercury switches, mercury relays, and nickel-cadmium batteries and lithium batteries.

o. Condensates derived from the overhead gases from kraft mill stream strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates.

p. [Reserved]

q. Spent materials (as defined in section 33.1-24-02-01) (other than hazardous wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing, or by beneficiation, provided that:

(1) The spent material is legitimately recycled to recover minerals, acids, cyanide, water, or other values;

(2) The spent material is not accumulated speculatively;

(3) Except as provided in paragraph 4, the spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of nonearthen materials providing structural support (except smelter buildings may have partially earthen floors provided the spent material is stored on the nonearthen portion), and have a roof suitable for diverting rainwater away from the foundation; a tank must be

freestanding, not be a surface impoundment (as defined in section 33.1-24-01-04), and be manufactured of a material suitable for containment of its contents; a container must be freestanding and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner or operator must operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings must be designed, constructed, and operated to prevent significant releases to the environment of these materials.

(4) The department may make a site-specific determination, after public review and comment, that only solid mineral processing spent material may be placed on pads, rather than in tanks, containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The decisionmaker must affirm that pads are designed, constructed, and operated to prevent significant releases of the spent material into the environment. Pads must provide the same degree of containment afforded by the hazardous waste tanks, containers, and buildings eligible for exclusion.

(a) The decisionmaker must also consider if storage on pads poses the potential for significant releases via ground water, surface water, and air exposure pathways. Factors to be considered for assessing the ground water, surface water, and air exposure pathways are the volume and physical and chemical properties of the spent material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway; and the possibility and extent of harm to human and environmental receptors via each exposure pathway.

(b) Pads must meet the following minimum standards: be designed of nonearthen material that is compatible with the chemical nature of the mineral processing spent material, capable of withstanding physical stresses associated with placement and removal; have run-on or runoff controls, or both; be operated in a manner which controls fugitive dust; and have integrity assurance through inspections and maintenance programs.

(c) Before making a determination under this paragraph, the department must provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers or broadcasting notice over local radio stations.

(5) The owner or operator provides notice to the department, providing the following information: the types of materials to be recycled, the type and location of the storage units and recycling processes, and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the recycling process.

(6) For purposes of subdivision g of subsection 2, mineral processing spent materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by nonmineral processing industries are not eligible for the conditional exclusion from the definition of solid waste.

r. Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (standard industrial code 2911) along with normal petroleum refinery process streams, provided:

(1) The oil is hazardous only because it exhibits the characteristic of ignitability (as defined in section 33.1-24-02-11) or toxicity for benzene (as defined in section 33.1-24-02-14, hazardous waste code D018), or both; and

(2) The oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An "associated organic chemical manufacturing facility" is a facility where the primary standard industrial code is 2869, but where operations may also include standard industrial codes 2821, 2822, and 2865; and is physically colocated with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. "Petrochemical recovered oil" is oil that has been reclaimed from secondary materials (for example, sludges, byproducts, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes.

s. Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or accumulated speculatively as defined in subsection 3 of section 33.1-24-02-01.

t. Hazardous secondary materials used to make zinc fertilizers, provided that the following conditions specified are satisfied:

(1) Hazardous secondary materials used to make zinc micronutrient fertilizers must not be accumulated speculatively, as defined in subdivision h of subsection 3 of section 33.1-24-02-01.

(2) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers must:

(a) Submit a one-time notice to the department, which contains the name, address, and identification number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this subdivision.

(b) Store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose must be an engineered structure made of nonearthen materials that provide structural support, and must have a floor, walls, and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers used for this purpose must be kept closed except when it is necessary to add or remove material, and must be in sound condition. Containers that are stored outdoors must be managed within storage areas that:

[1] Have containment structures or systems sufficiently impervious to contain leaks, spills, and accumulated precipitation;

[2] Provide for effective drainage and removal of leaks, spills, and accumulated precipitation; and

[3] Prevent run-on into the containment system.

(c) With each offsite shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of this subdivision.

(d) Maintain at the generator's or intermediate handler's facility for no less than three years records of all shipments of excluded hazardous secondary materials. For each shipment these records must at a minimum contain the following information:

[1] Name of the transporter and date of the shipment;

[2] Name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment; and

[3] Type and quantity of excluded secondary material in each shipment.

(3) Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials must:

(a) Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in subparagraph b of paragraph 2.

(b) Submit a one-time notification to the department that, at a minimum, specifies the name, address, and identification number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this subdivision.

(c) Maintain for a minimum of three years records of all shipments of excluded hazardous secondary materials received by the manufacturer, which must at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received, and a brief description of the industrial process that generated the material.

(d) Submit to the department an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial process or processes from which they were generated. The annual report shall be submitted by March first of every year.

(4) Nothing in this subdivision preempts, overrides, or otherwise negates the provision in section 33.1-24-03-02, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(5) Interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in subparagraph a of paragraph 2, and that afterward will be used only to store hazardous secondary materials excluded under this subdivision, are not subject to the closure requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and

33.1-24-05-800 through 33.1-24-05-819 and the applicable requirements of subsection 5 of section 33.1-24-06-16.

u. Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under subdivision t, provided that:

(1) The fertilizers meet the following contaminant limits:

(a) For metal contaminants:

<u>Constituent</u>	<u>Maximum Allowable Total Concentration in Fertilizer, Per Unit (1 Percent) of Zinc (ppm)</u>
<u>Arsenic</u>	<u>0.3</u>
<u>Cadmium</u>	<u>1.4</u>
<u>Chromium</u>	<u>0.6</u>
<u>Lead</u>	<u>2.8</u>
<u>Mercury</u>	<u>0.3</u>

(b) For dioxin contaminants the fertilizer must contain no more than eight parts per trillion of dioxin, measured as toxic equivalent (TEQ).

(2) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing must also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the product or products introduced into commerce.

(3) The manufacturer maintains for no less than three years records of all sampling and analyses performed for purposes of determining compliance with the requirements of paragraph 2. Such records must at a minimum include:

(a) The dates and times product samples were taken and the dates the samples were analyzed;

(b) The names and qualifications of the person taking the samples;

(c) A description of the methods and equipment used to take the samples;

(d) The name and address of the laboratory facility at which analyses of the samples were performed;

(e) A description of the analytical methods used, including any cleanup and sample preparation methods; and

(f) All laboratory analytical results used to determine compliance with the contaminant limits specified in subdivision u.

v. Used cathode ray tubes:

- (1) Used, intact cathode ray tubes as defined in section 33.1-24-01-04 are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated as defined in subdivision h of subsection 3 of section 33.1-24-02-01 by cathode ray tube collectors or glass processors.
- (2) Used, intact cathode ray tubes as defined in section 33.1-24-01-04 are not solid wastes when exported for recycling provided that they meet the requirements of section 33.1-24-02-26.
- (3) Used, broken cathode ray tubes as defined in section 33.1-24-01-04 are not solid wastes provided that they meet the requirements of section 33.1-24-02-25.
- (4) Glass removed from cathode ray tubes is not a solid waste provided that it meets the requirements of subsection 3 of section 33.1-24-02-25.

w. Solvent-contaminated wipes that are sent for cleaning and reuse are not solid wastes from the point of generation, provided that:

- (1) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in nonleaking, closed containers that are labeled "excluded solvent-contaminated wipes." The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;
- (2) The solvent-contaminated wipes may be accumulated by the generator for up to one hundred eighty days from the start date of accumulation for each container prior to being sent for cleaning;
- (3) At the point of being sent for cleaning onsite or at the point of being transported offsite for cleaning, the solvent-contaminated wipes must contain no free liquids as defined in section 33.1-24-01-04;
- (4) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in chapters 33.1-24-01 through 33.1-24-04 and 33.1-24-06, and sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-700 through 33.1-24-05-929, and 33.1-24-05-950 through 33.1-24-05-1149;
- (5) Generators must maintain at the facility the following documentation:
 - (a) Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes;
 - (b) Documentation that the 180-day accumulation time limit in paragraph 2 of subdivision w of subsection 1 of section 33.1-24-02-04 is being met;
 - (c) Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned onsite or at the point of being transported offsite for laundering or dry cleaning;

(6) The solvent-contaminated wipes are sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

x. Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator, provided that the material complies with:

(1) The hazardous secondary material:

(a) Is generated and reclaimed at the generating facility (for purposes of this definition, generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator); or

(b) Is generated and reclaimed at different facilities, if the reclaiming facility is controlled by the generator or if both the generating facility and the reclaiming facility are controlled by a person as defined in section 33.1-24-01-04, and if the generator provides one of the following certifications: "on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], which is controlled by [insert generator facility name] and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material," or "on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], that both facilities are under common control, and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material." For purposes of this subparagraph, "control" means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in section 33.1-24-01-04 shall not be deemed to "control" such facilities. The generating and receiving facilities must both maintain at their facilities for no less than three years records of hazardous secondary materials sent or received under this exclusion. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received under the exclusion. These requirements may be satisfied by routine business records (for example, financial records, bills of lading, copies of department of transportation shipping papers, or electronic confirmation); or

(c) Is generated pursuant to a written contract between a tolling contractor and a toll manufacturer and is reclaimed by the tolling contractor, if the tolling contractor certifies the following: "On behalf of [insert tolling contractor name], I certify that [insert tolling contractor name] has a written contract with [insert toll manufacturer name] to manufacture [insert name of product or intermediate] which is made from specified unused materials, and that [insert tolling contractor name] will reclaim the hazardous secondary materials generated during this manufacture. On behalf of [insert tolling contractor name], I also certify that [insert tolling contractor name] retains ownership of, and responsibility for, the hazardous secondary materials that are generated during the course of the manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process". The tolling contractor must maintain at its facility for no less than three years records of hazardous secondary materials received pursuant to its written contract with the tolling manufacturer, and the

tolling manufacturer must maintain at its facility for no less than three years records of hazardous secondary materials shipped pursuant to its written contract with the tolling contractor. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received pursuant to the written contract. These requirements may be satisfied by routine business records (for example, financial records, bills of lading, copies of department of transportation shipping papers, or electronic confirmations). For purposes of this subparagraph, tolling contractor means a person who arranges for the production of a product or intermediate made from specified unused materials through a written contact with a toll manufacturer. Toll manufacturer means a person who produces a product or intermediate made from specified unused materials pursuant to a written contract with a tolling contractor.

(2) The following requirements apply to hazardous secondary material managed under this exclusion:

(a) The hazardous secondary material is contained as defined in section 33.1-24-01-04. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of reclamation. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a solid waste.

(b) The hazardous secondary material is not speculatively accumulated, as defined in subdivision h of subsection 3 of section 33.1-24-02-01.

(c) Notice is provided as required by section 33.1-24-01-18.

(d) The material is not otherwise subject to material-specific management conditions under subsection 1 when reclaimed, and it is not a spent lead-acid battery (see sections 33.1-24-05-235 and 33.1-24-05-702).

(e) Persons performing the recycling of hazardous secondary materials under this exclusion must maintain documentation of their legitimacy determination onsite. Documentation must be a written description of how the recycling meets all four factors in subsection 1 of section 33.1-24-01-19. Documentation must be maintained for three years after the recycling operation has ceased.

(f) The emergency preparedness and response requirements found in sections 33.1-24-02-120 through 33.1-24-02-129 are met.

y. Hazardous secondary material that is generated and then transferred to a verified reclamation facility for the purpose of reclamation is not a solid waste, provided that:

(1) The material is not speculatively accumulated, as defined in subdivision h of subsection 3 of section 33.1-24-02-01;

(2) The material is not handled by any person or facility other than the hazardous secondary material generator, the transporter, an intermediate facility or a reclaimer, and, while in transport, is not stored for more than ten days at a transfer facility, as defined in section 33.1-24-01-04, and is packaged according to applicable department of transportation regulations at 49 CFR Parts 173, 178, and 179 while in transport;

(3) The material is not otherwise subject to material-specific management conditions under subsection 1 when reclaimed, and it is not a spent lead-acid battery (see sections 33.1-24-05-235 and 33.1-24-05-702);

(4) The reclamation of the material is legitimate, as specified under section 33.1-24-01-19;

(5) The hazardous secondary material generator satisfied all of the following conditions;

(a) The material must be contained as defined in section 33.1-24-01-04. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of recycling. Hazardous secondary material managed in a unit with leaks or other continuing releases is discarded and a solid waste.

(b) The hazardous secondary material generator must arrange for transport of hazardous secondary materials to a verified reclamation facility or facilities in the United States. A verified reclamation facility is a facility that has been granted a variance under subsection 4 of section 33.1-24-01-10, or a reclamation facility where the management of the hazardous secondary materials is addressed under a hazardous waste permit or interim status standards. If the hazardous secondary material will be passing through an intermediate facility, the intermediate facility must have been granted a variance under subsection 4 of section 33.1-24-01-10 or the management of the hazardous secondary materials at that facility must be addressed under a hazardous waste permit or interim status standards, and the hazardous secondary material generator must make contractual arrangements with the intermediate facility to ensure that the hazardous secondary material is sent to the reclamation facility identified by the hazardous secondary material generator.

(c) The hazardous secondary material generator must maintain at the generating facility for no less than three years records of all offsite shipments of hazardous secondary materials. For each shipment, these records must, at a minimum, contain the following information:

[1] Name of the transporter and date of the shipment;

[2] Name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent;

[3] The type and quantity of hazardous secondary material in the shipment.

(d) The hazardous secondary material generator must maintain at the generating facility for no less than three years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all offsite shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer or intermediate facility, the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (for example, financial records, bills of lading, copies of department of transportation shipping papers, or electronic confirmations of receipt);

(e) The hazardous secondary material generator must comply with the emergency preparedness and response conditions in sections 33.1-24-02-120 through 33.1-24-02-129.

(6) Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities as defined in section 33.1-24-01-04 satisfy all of the following conditions:

(a) The reclaimer and intermediate facility must maintain at its facility for no less than three years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary materials that were received and subsequently sent offsite from the facility for further reclamation. For each shipment, these records must at a minimum contain the following information:

[1] Name of the transporter and date of the shipment;

[2] Name and address of the hazardous secondary material generator and, if applicable, the name and address of the reclaimer or intermediate facility which the hazardous secondary materials were received from;

[3] The type and quantity of hazardous secondary material in the shipment; and

[4] For hazardous secondary materials that, after being received by the reclaimer or intermediate facility, were subsequently transferred offsite for further reclamation, the name and address of the subsequent reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent.

(b) The intermediate facility must send the hazardous secondary material to the reclaimer or reclaimers designated by the hazardous secondary materials generator.

(c) The reclaimer and intermediate facility must send to the hazardous secondary material generator confirmations of receipt for all offsite shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer or intermediate facility, the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (for example, financial records, bills of lading, copies of department of transportation shipping papers, or electronic confirmations of receipt).

(d) The reclaimer and intermediate facility must manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and must be contained. An "analogous raw material" is a raw material for which a hazardous secondary material is a substitute and serves the same function and has similar physical and chemical properties as the hazardous secondary material.

(e) Any residuals that are generated from reclamation processes will be managed in a manner that is protective of human health and the environment. If any residuals exhibit a hazardous characteristic according to sections 33.1-24-02-10 through 33.1-24-02-14, or if the residuals themselves are specifically listed in

sections 33.1-24-02-15 through 33.1-24-02-19, such residuals are hazardous wastes and must be managed in accordance with the applicable requirements of chapters 33.1-24-01 through 33.1-24-04, sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-929, 33.1-24-05-950 through 33.1-24-05-1149, subsection 5 of section 33.1-24-06-16 and chapter 33.1-24-06.

(f) The reclaimer and intermediate facility have financial assurance as required under sections 33.1-24-02-33 through 33.1-24-02-42.

(g) The reclaimer and intermediate facility have been granted a variance under subsection 4 of section 33.1-24-01-10 or have a hazardous waste permit or interim status standards that address the management of the hazardous secondary materials; and

(7) All persons claiming the exclusion under this subdivision provide notification as required under section 33.1-24-01-18.

z. Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste, provided that:

(1) The hazardous secondary material consists of one or more of the following spent solvents: toluene, xylenes, ethylbenzene, 1,2,4-trimethylbenzene, chlorobenzene, n-hexane, cyclohexane, methyl tert-butyl ether, acetonitrile, chloroform, chloromethane, dichloromethane, methyl isobutyl ketone, NN-dimethylformamide, tetrahydrofuran, n-butyl alcohol, ethanol, and methanol;

(2) The hazardous secondary material originated from using one or more of the solvents listed in paragraph 1, in a commercial grade for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and the paints and coatings manufacturing sectors (NAICS 325510).

(3) The hazardous secondary material generator sends the hazardous secondary material spent solvents listed in paragraph 1 to a remanufacturer in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), or the paints and coatings manufacturing sectors (NAICS 325510).

(4) After remanufacturing one or more of the solvents listed in paragraph 1, the use of the remanufactured solvent shall be limited to reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and the paints and coatings manufacturing sectors (NAICS 325510) or to using them as ingredients in a product. These allowed uses correspond to chemical functional uses enumerated under the chemical data reporting rule of the Toxic Substances Control Act (40 CFR Parts 704, 710-711), including industrial function codes U015 (solvents consumed in a reaction to produce other chemicals) and U030 (solvents become part of the mixture);

(5) After remanufacturing one or more of the solvents listed in paragraph 1, the use of the remanufactured solvent does not involve cleaning or degreasing oil, grease, or similar material from textiles, glassware, metal surfaces, or other articles. These

disallowed continuing uses correspond to chemical functional uses in industrial function code U029 under the chemical data reporting rule of the Toxic Substances Control Act; and

(6) Both the hazardous secondary material generator and the remanufacturer must:

(a) Notify the department and update the notification every two years per section 33.1-24-01-18;

(b) Develop and maintain an up-to-date remanufacturing plan which identifies:

[1] The name, address and identification number of the generator or generators and the remanufacturer or remanufacturers;

[2] The types and estimated annual volumes of spent solvents to be remanufactured;

[3] The processes and industry sectors that generate the spent solvents;

[4] The specific uses and industry sectors for the remanufactured solvents; and

[5] Certification from the remanufacturer stating "On behalf of [insert remanufacturer facility name], I certify that this facility is a remanufacturer under pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), or the paints and coatings manufacturing sectors (NAICS 325510), and will accept the spent solvent or solvents for the sole purpose of remanufacturing into commercial-grade solvent or solvents that will be used for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions), or for the use as product ingredient or ingredients. I also certify that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under 40 CFR Part 60, Part 61 or Part 63, or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in sections 33.1-24-02-170 through 33.1-24-02-179 (vents), sections 33.1-24-02-180 through 33.1-24-02-199 (equipment), and sections 33.1-24-02-200 through 33.1-24-02-214 (tank storage)";

(c) Maintain records of shipments and confirmations of receipts for a period of three years from the dates of the shipments;

(d) Prior to remanufacturing, store the hazardous spent solvents in tanks or containers that meet technical standards found in sections 33.1-24-02-50 through 33.1-24-02-59 and sections 33.1-24-02-60 through 33.1-24-02-74, with the tanks and containers being labeled or otherwise having an immediately available record of material being stored;

(e) During remanufacturing, and during storage of the hazardous secondary materials prior to remanufacturing, the remanufacturer certifies that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act

regulations under 40 CFR Part 60, Part 61 or Part 63; or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in sections 33.1-24-02-170 through 33.1-24-02-179 (vents), sections 33.1-24-02-180 through 33.1-24-02-199 (equipment), and sections 33.1-24-02-200 through 33.1-24-02-214 (tank storage); and

(f) Meet the requirements prohibiting speculative accumulation per subdivision h of subsection 3 of section 33.1-24-02-01.

2. Solid wastes that are not hazardous wastes. The following solid wastes are not hazardous wastes:

a. Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered, for example, refuse-derived fuel, or reused. "Household waste" means any waste material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels, and motels), bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). A resource recovery facility managing municipal solid waste may not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purpose of regulation under this article, if such facility:

(1) Receives and burns only:

(a) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources); and

(b) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(2) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

b. Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(1) The growing and harvesting of agricultural crops.

(2) The raising of animals, including animal manures.

c. Mining overburden returned to the minesite.

d. Wastes generated primarily from the combustion or processes that support the combustion of coal or other fossil fuels:

(1) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by section 33.1-24-05-537 for facilities that burn or process hazardous waste.

(2) The following wastes generated primarily from processes that support the combustion of coal or other fossil fuels that are codisposed with the wastes in paragraph 1, except as provided by section 33.1-24-05-537 for facilities that burn or process hazardous waste:

- (a) Coal pile runoff. For purposes of this subdivision, coal pile runoff means any precipitation that drains off coal piles.
- (b) Boiler cleaning solutions. For purposes of this subdivision, boiler cleaning solutions means water solutions and chemical solutions used to clean the fire-side and water-side of the boiler.
- (c) Boiler blowdown. For purposes of this subdivision, boiler blowdown means water purged from boilers used to generate steam.
- (d) Process water treatment and demineralizer regeneration wastes. For purposes of this subdivision, process water treatment and demineralizer regeneration wastes means sludges, rinses, and spent resins generated from processes to remove dissolved gases, suspended solids, and dissolved chemical salts from combustion system process water.
- (e) Cooling tower blowdown. For purposes of this subdivision, cooling tower blowdown means water purged from a closed cycle cooling system. Closed cycle cooling systems include cooling towers, cooling ponds, or spray canals.
- (f) Air heater and precipitator washes. For purposes of this subdivision, air heater and precipitator washes means wastes from cleaning air preheaters and electrostatic precipitators.
- (g) Effluents from floor and yard drains and sumps. For purposes of this subdivision, effluents from floor and yard drains and sumps means wastewaters, such as wash water, collected by or from floor drains, equipment drains, and sumps located inside the power plant building; and wastewaters, such as rain runoff, collected by yard drains and sumps located outside the power plant building.
- (h) Wastewater treatment sludges. For purposes of this subdivision, wastewater treatment sludges refers to sludges generated from the treatment of wastewaters specified in subparagraphs a through f.
- e. Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.
- f. The following chromium-containing wastes:
 - (1) Wastes that fail the test for the toxicity characteristic because chromium is present or are listed in this chapter due to the presence of chromium, which do not fail the test for toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:
 - (a) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium;
 - (b) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and
 - (c) The waste is typically and frequently managed in nonoxidizing environments.

(2) Specific wastes which meet the standard of paragraph 1 (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are:

(a) Chrome (blue) trimmings, chrome (blue) shavings, sewer screenings, and wastewater treatment sludges, generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(b) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; and through-the-blue.

(c) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(d) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(e) Wastewater treatment sludges from the production of TiO₂ pigment using chromium-bearing ores by the chloride process.

g. Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock, and overburden from the mining of uranium ore), except as provided by section 33.1-24-05-537 for facilities that burn or process hazardous waste.

(1) For purposes of this subdivision, beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water or carbon dioxide, or both; roasting, autoclaving, or chlorination, or a combination thereof, in preparation for leaching (except when the roasting, autoclaving, or chlorination or a combination thereof, and leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching.

(2) For the purposes of this subdivision, solid waste from the processing of ores and minerals includes only the following wastes as generated:

(a) Slag from primary copper processing;

(b) Slag from primary lead processing;

(c) Red and brown muds from bauxite refining;

(d) Phosphogypsum from phosphoric acid production;

(e) Slag from elemental phosphorous production;

(f) Gasifier ash from coal gasification;

(g) Process wastewater from coal gasification;

- (h) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
 - (i) Slag tailings from primary copper processing;
 - (j) Fluorogypsum from hydrofluoric acid production;
 - (k) Process wastewater from hydrofluoric acid production;
 - (l) Air pollution control dust or sludge from iron blast furnaces;
 - (m) Iron blast furnace slag;
 - (n) Treated residue from roasting or leaching of chrome ore;
 - (o) Process wastewater from primary magnesium processing by the anhydrous process;
 - (p) Process wastewater from phosphoric acid production;
 - (q) Basic oxygen furnace and open hearth furnace air pollution control dust or sludge from carbon steel production;
 - (r) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
 - (s) Chloride process waste solids from titanium tetrachloride production; and
 - (t) Slag from primary zinc processing.
- (3) A residue derived from coprocessing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under this subsection if the owner or operator:
- (a) Processes at least fifty percent by weight normal beneficiation raw materials or with normal mineral processing raw materials; and
 - (b) Legitimately reclaims the secondary mineral processing materials.
- h. Cement kiln dust waste, except as provided by section 33.1-24-05-537 for facilities that burn or process hazardous waste.
- i. Solid waste that consists of discarded arsenical-treated wood or wood products which fails the test for the toxicity characteristic for hazardous waste codes D004 through D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials intended end use.
- j. Petroleum-contaminated media and debris that fail the test for the toxicity characteristic of section 33.1-24-02-14 (hazardous waste codes D018 through D043 only) and are subject to the corrective action regulations under chapter 33.1-24-08.
- k. Injected ground water that is hazardous only because it exhibits the toxicity characteristic (hazardous waste codes D018 through D043 only) in section 33.1-24-02-14 that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until

January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For ground water returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, until October 2, 1991. New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

(1) Operations are performed pursuant to a written state agreement that includes a provision to assess the ground water and the need for further remediation once the free phase recovery is completed; and

(2) A copy of the written agreement has been submitted to Waste Identification Branch (5304), United States Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Washington, D.C. 20460.

l. Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air-conditioning systems, mobile refrigeration, and commercial and industrial air-conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

m. Nonterne plated used oil filters that are not mixed with waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 if these oil filters have been gravity hot-drained using one of the following methods:

(1) Puncturing the filter antidrain back valve or the filter dome end and hot-draining;

(2) Hot-draining and crushing;

(3) Dismantling and hot-draining; or

(4) Any other equivalent hot-draining method that will remove used oil.

n. Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.

o. Leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that:

(1) The solid wastes disposed would meet one or more of the listing descriptions for hazardous wastes codes K169, K170, K171, K172, K174, K175, K176, K177, K178, and K181 if these wastes had been generated after the effective date of the listing;

(2) The solid wastes described in paragraph 1 were disposed prior to the effective date of the listing;

(3) The leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;

(4) Discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a publicly owned treatment works by truck, rail, or dedicated pipe, is subject to regulation under sections 307(b) or 402 of the Clean Water Act.

(5) As of February 13, 2001, leachate or gas condensate derived from K169 through K172 is no longer exempt if it is stored or managed in a surface impoundment prior

to discharge. As of November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (for example, shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this paragraph after the emergency ends.

p. Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation, provided that:

(1) The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in nonleaking, closed containers that are labeled "excluded solvent-contaminated wipes". The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;

(2) The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for disposal;

(3) At the point of being transported for disposal, the solvent-contaminated wipes must contain no free liquids as defined in section 33.1-24-01-04;

(4) Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in chapters 33.1-24-01 through 33.1-24-04 and 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-700 through 33.1-24-05-929, and 33.1-24-05-950 through 33.1-24-05-1149;

(5) Generators must maintain at the facility the following documentation:

(a) Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes;

(b) Documentation that the 180-day accumulation time limit in paragraph 2 of subdivision p of subsection 2 of section 33.1-24-02-04 is being met;

(c) Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal;

(6) The solvent-contaminated wipes are sent for disposal:

(a) To a municipal solid waste landfill regulated under article 33.1-20 including chapter 33.1-20-06.1, or to a hazardous waste landfill regulated under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-

24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, or subsection 5 of section 33.1-24-06-16; or

- (b) To a municipal waste combustor or other combustion facility regulated under section 129 of the Clean Air Act or to a hazardous waste combustor, boiler, or industrial furnace regulated under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-05-525 through 33.1-24-05-549.

3. **Hazardous wastes that are exempted from certain regulations.** A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit is not subject to regulation under chapters 33.1-24-03 through 33.1-24-07 or to the notification requirements until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than ninety days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

4. **Samples.**

- a. Except as provided in subdivision b, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this chapter or chapters 33.1-24-03 through 33.1-24-07 or to the notification requirements when:

- (1) The sample is being transported to a laboratory for the purpose of testing;
- (2) The sample is being transported back to the sample collector after testing;
- (3) The sample is being stored by the sample collector before transport to a laboratory for testing;
- (4) The sample is being stored in a laboratory before testing;
- (5) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or
- (6) The sample is being stored temporarily in the laboratory after testing for a specific purpose, e.g., until conclusion of a court case or enforcement action if further testing of the sample may be necessary.

- b. In order to qualify for the exemption in paragraphs 1 and 2 of subdivision a, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

- (1) Comply with the United States department of transportation, the United States postal service, or any other applicable shipping requirement; or
- (2) Comply with the following requirements if the sample collector determines that the United States department of transportation, the United States postal service, or other shipping requirements do not apply to the shipment of the sample:

- (a) Assure that the following information accompanies the sample:

[1] The sample collector's name, mailing address, and telephone number;

[2] The laboratory's name, mailing address, and telephone number;

[3] The quantity of the sample;

[4] The date of shipment; and

[5] A description of the sample.

(b) Package the sample so that it does not leak, spill, or vaporize from its packaging.

c. This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in subdivision a.

5. Treatability study samples.

a. Except as provided in subdivision b, persons who generate or collect samples for the purpose of conducting treatability studies as defined in section 33.1-24-01-04 are not subject to any requirement of chapters 33.1-24-02 through 33.1-24-04 or to the notification requirements, nor are such samples included in the quantity determination of section 33.1-24-02-05 and subsection 4 of section 33.1-24-03-12 when:

(1) The sample is being collected and prepared for transportation by the generator or sample collectors;

(2) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or

(3) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

b. The exemption in subdivision a is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(1) The generator or sample collector uses, in "treatability studies", no more than ten thousand kilograms of media contaminated with nonacute hazardous waste, one thousand kilograms of nonacute hazardous waste other than contaminated media, one kilogram of acute hazardous waste, twenty-five hundred kilograms of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream.

(2) The mass of each sample shipment does not exceed ten thousand kilograms; the ten thousand kilogram quantity may be all media contaminated with nonacute hazardous waste, or may include twenty-five hundred kilograms of media contaminated with acute hazardous waste, one thousand kilograms of hazardous waste, and one kilogram of acute hazardous waste.

(3) The sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of subparagraph a or b are met.

(a) The transportation of each sample shipment complies with United States department of transportation, United States postal service, or any other applicable shipping requirements; or

(b) If the United States department of transportation, United States postal service, or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

- [1] The name, mailing address, and telephone number of the originator of the samples;
 - [2] The name, address, and telephone number of the facility that will perform the treatability study;
 - [3] The quantity of the sample;
 - [4] The date of shipment; and
 - [5] A description of the sample, including its hazardous waste number.
- (4) The sample is shipped to a laboratory or testing facility which is exempt under subsection 6 of section 33.1-23-02-04 or has an appropriate hazardous waste permit or interim status.
- (5) The generator or sample collector maintains the following records for a period ending three years after completion of the treatability study:
- (a) Copies of the shipping document;
 - (b) A copy of the contract with the facility conducting the treatability study;
 - (c) Documentation showing:
 - [1] The amount of waste shipped under this exemption;
 - [2] The name, address, and identification number of the laboratory or testing facility that received the waste;
 - [3] The date the shipment was made; and
 - [4] Whether unused samples and residues were returned to the generator.
- (6) The generator reports the information required under subparagraph c of paragraph 5 in its biennial report.
- c. The department may grant requests, on a case-by-case basis, for up to an additional two years for treatability studies involving bioremediation. The department may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs 1 and 2 of subdivision b and subdivision d of subsection 6, for up to an additional five thousand kilograms of media contaminated with nonacute hazardous waste, five hundred kilograms of nonacute hazardous waste, twenty-five hundred kilograms of media contaminated with acute hazardous waste, and one kilogram of acute hazardous waste:
- (1) In response to requests for authorization to ship, store, and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process, for example, batch versus continuous, size of the unit undergoing testing, particularly in relation to scale-up considerations, the time and quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.
 - (2) In response to requests for authorization to ship, store, and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when there has been an equipment or mechanical failure during the conduct of the treatability study; there is a need to verify the results of a previous study; there

is a need to study and analyze alternative techniques within a previously evaluated process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(3) The additional quantities and timeframes allowed in paragraphs 1 and 2 are subject to all the provisions in subdivision a and paragraphs 3 through 6 of subdivision b. The generator or sample collector must apply to the department and provide in writing the following information:

(a) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed;

(b) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies, including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;

(c) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

(d) If such further study is being required due to equipment of mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and

(e) Such other information that the department considers necessary.

6. Samples undergoing treatability studies at laboratories and testing facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies, to the extent such facilities are not otherwise subject to hazardous waste requirements, are not subject to any requirements of this article, or to the notification requirements provided that the conditions of subdivisions a through k are met. A mobile treatment unit may qualify as a testing facility subject to subdivisions a through k. Where a group of mobile treatment units are located at the same site, the limitations specified in subdivisions a through k apply to the entire group of mobile treatment units collectively as if the group were one mobile treatment unit.

a. No less than forty-five days before conducting treatability studies, the facility notifies the department in writing that it intends to conduct treatability studies under this subsection.

b. The laboratory or testing facility conducting the treatability study has an identification number.

c. No more than a total of ten thousand kilograms of "as received" media contaminated with nonacute hazardous waste, twenty-five hundred kilograms of media contaminated with acute hazardous waste, or two hundred fifty kilograms of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" wastes refers to the waste as received in the shipment from the generator or sample collector.

d. The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed ten thousand kilograms, the total of which

can include ten thousand kilograms of media contaminated with nonacute hazardous waste, twenty-five hundred kilograms of media contaminated with acute hazardous waste, one thousand kilograms of nonacute hazardous waste other than contaminated media, and one kilogram of acute hazardous waste. This quantity limitation does not include treatment materials, including nonhazardous solid waste, added to "as received" hazardous waste.

e. No more than ninety days have elapsed since the treatability study for the sample was completed, or no more than one year, two years for treatability studies involving bioremediation, have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date occurs first. Up to five hundred kilograms of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

f. The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

g. The facility maintains records for three years following completion of each study that shows compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

(1) The name, address, and identification number of the generator or sample collector of each waste sampled;

(2) The date the shipment was received;

(3) The quantity of waste accepted;

(4) The quantity of "as received" waste in storage each day;

(5) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

(6) The date the treatability study was concluded; and

(7) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the identification number.

h. The facility keeps, onsite, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending three years from the completion date of each treatability study.

i. The facility prepares and submits a report to the department by March fifteenth of each year that includes the following information for the previous calendar year:

(1) The name, address, and identification number of the facility conducting the treatability study;

(2) The types, by process, of treatability studies conducted;

(3) The names and addresses of persons for whom studies have been conducted, including their identification numbers;

(4) The total quantity of waste in storage each day;

(5) The quantity and type of waste subjected to treatability studies;

(6) When each treatability study was conducted; and

(7) The final disposition of residues and unused samples from each treatability study.

j. The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under section 33.1-24-02-03 and, if so, are subject to chapters 33.1-24-02 through 33.1-24-06, unless the residues and unused samples are returned to the sample originator under the subsection 5 of section 33.1-24-02-04 exemption.

k. The facility notifies the department by letter when the facility is no longer planning to conduct any treatability studies at the site.

7. **Polychlorinated biphenyl wastes regulated under Toxic Substance Control Act.** The disposal of polychlorinated biphenyl-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under 40 CFR 761 and that are hazardous only because they fail the test for the toxicity characteristic (hazardous waste codes D018 through D043 only) are exempt from regulation under this article, and the notification requirements.

8. **Dredged material that is not a hazardous waste.** Dredged material that is subject to the requirements of a permit that has been issued under section 404 of the Federal Water Pollution Control Act [33 U.S.C.1344] or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 [33 U.S.C. 1413] is not a hazardous waste. For this subsection, the following definitions apply:

a. The term dredged material has the same meaning as defined in 40 CFR 232.2.

b. The term permit means:

(1) A permit issued by the United States army corps of engineers (corps) or an approved state under section 404 of the Federal Water Pollution Control Act [33 U.S.C. 1344];

(2) A permit issued by the corps under section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 [33 U.S.C. 1413]; or

(3) In the case of corps civil work projects, the administrative equivalent of the permits referred to in paragraphs 1 and 2, as provided for in corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6).

9. Carbon dioxide stream injected for geologic sequestration. Carbon dioxide streams that are captured and transported for purposes of injection into an underground injection well subject to the requirements for class VI underground injection control wells, including the requirements in 40 CFR parts 144 and 146 of the underground injection control program of the Safe Drinking Water Act, are not a hazardous waste, provided the following conditions are met:

a. Transportation of the carbon dioxide stream must be in compliance with United States department of transportation requirements, including the pipeline safety laws (49 United States code 60101 et seq.) and regulations (49 CFR parts 190-199) of the United States department of transportation, and pipeline safety regulations adopted and administered by a state authority pursuant to a certification under 49 United States code 60105, as applicable;

b. Injection of the carbon dioxide stream must be in compliance with the applicable requirements for class VI underground injection control wells, including the applicable requirements in 40 CFR parts 144 and 146;

c. No hazardous wastes shall be mixed with, or otherwise coinjected with, the carbon dioxide stream; and

d. Certification statements:

(1) Any generator of a carbon dioxide stream, who claims that a carbon dioxide stream is excluded under this subsection, must have an authorized representative (as defined in section 33.1-24-01-04) sign a certification statement worded as follows: I certify under penalty of law that the carbon dioxide stream that I am claiming to be excluded under subsection 9 of section 33.1-24-02-04 has not been mixed with hazardous wastes, and I have transported the carbon dioxide stream in compliance with (or have contracted with a pipeline operator or transporter to transport the carbon dioxide stream in compliance with) department of transportation requirements, including the pipeline safety laws (49 United States code 60101 et seq.) and regulations (49 CFR parts 190-199) of the United States department of transportation, and the pipeline safety regulations adopted and administered by a state authority pursuant to a certification under 49 United States code 60105, as applicable, for injection into a well subject to the requirements for the class VI underground injection control program of the Safe Drinking Water Act.

(2) Any class VI underground injection control well owner or operator, who claims that a carbon dioxide stream is excluded under this subsection, must have an authorized representative (as defined in section 33.1-24-01-04) sign a certification statement worded as follows: I certify under penalty of law that the carbon dioxide stream that I am claiming to be excluded under subsection 9 of section 33.1-24-02-04 has not been mixed with, or otherwise coinjected with, hazardous waste at the underground injection control class VI permitted facility, and that injection of the carbon dioxide stream is in compliance with the applicable requirements for underground injection class VI wells, including the applicable requirements in 40 CFR parts 144 and 146.

(3) The signed certification statement must be kept onsite for no less than three years, and must be made available within seventy-two hours of a written request from the administrator, regional administrator, or the department, or their designee. The signed certification statement must be renewed every year that the exclusion is claimed, by having an authorized representative (as defined in section 33.1-24-01-04) annually prepare and sign a new copy of the certification statement within one year of the date of the previous statement. The signed certification statement must also be readily accessible on the facility's publicly available website (if such website exists) as a public notification with the title of "carbon dioxide stream certification" at the time the exclusion is claimed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-16; S.L. 2017, ch. 199, § 19

33.1-24-02-05. Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

1. A generator is a conditionally exempt small quantity generator in a calendar month if the generator generates no more than one hundred kilograms of hazardous waste in that month.

2. Except for those wastes identified in subsections 5, 6, 7, and 10, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under chapters 33.1-24-03 through 33.1-24-07, and the notification requirements, provided the generator complies with the requirements of subsections 6, 7, and 10.

3. When making the quantity determinations, the generator must include all hazardous waste that it generates, except hazardous waste that:

a. Is exempt from regulation under subsections 3 through 7 of section 33.1-24-02-04, subdivision c of subsection 1 of section 33.1-24-02-06, or subsection 1 of section 33.1-24-02-07;

b. Is managed immediately upon generation only in onsite elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in section 33.1-24-01-04;

c. Is recycled, without prior storage or accumulation, only in an onsite process subject to regulation under subdivision b of subsection 3 of section 33.1-24-02-06;

d. Is used oil managed under the requirements of subdivision d of subsection 1 of section 33.1-24-02-06 and sections 33.1-24-05-600 through 33.1-24-05-689;

e. Is spent lead-acid batteries managed under sections 33.1-24-05-235 through 33.1-24-05-249;

f. Is universal waste managed under subsection 5 of section 33.1-24-02-06 and sections 33.1-24-05-700 through 33.1-24-05-799; or

g. Is a hazardous waste that is an unused commercial chemical product (listed in sections 33.1-24-02-15 through 33.1-24-02-19, or exhibiting one or more characteristics in sections 33.1-24-02-10 through 33.1-24-02-14) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to section 33.1-24-03-74. For purposes of this subdivision, the term eligible academic entity shall have the meaning as defined in section 33.1-24-03-61.

4. In determining the quantity of hazardous waste generated, a generator need not include:

a. Hazardous waste when it is removed from onsite storage;

b. Hazardous waste produced by onsite treatment, including reclamation, of their hazardous waste, so long as the hazardous waste that is treated was counted once; or

c. Spent materials that are generated, reclaimed, and subsequently reused onsite, so long as such spent materials have been counted once.

5. If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under chapters 33.1-24-03 through 33.1-24-07, and the notification requirements.

a. A total of one kilogram of acute hazardous waste listed in section 33.1-24-02-16, or subsection 5 of section 33.1-24-02-18.

b. A total of one hundred kilograms of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste listed in section 33.1-24-02-16, or subsection 5 of section 33.1-24-02-18. [Comment:

"Full regulation" means those regulations applicable to generators of one thousand kilograms or greater of hazardous waste in a calendar month.]

6. In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than set forth in subdivisions a or b of subsection 5 to be excluded from full regulation under this section, the generator shall comply with the following requirements:

a. Section 33.1-24-03-02;

b. The generator may accumulate acute hazardous waste onsite. If the generator accumulates at any time acute hazardous waste in quantities greater than those set forth in subdivision a or b of subsection 5, all of those accumulated wastes are subject to regulation under chapters 33.1-24-03 through 33.1-24-07 and the applicable notification requirements. The time period of subsection 1 of section 33.1-24-03-12, for accumulation of wastes onsite, begins when the accumulated wastes exceed the applicable exclusion limit;

c. A conditionally exempt small quantity generator may either treat or dispose of the generator's acute hazardous waste in an onsite facility or ensure delivery to an offsite storage, treatment, or disposal facility, either of which, if located in the United States, is:

(1) Permitted under chapter 33.1-24-06;

(2) In interim status under North Dakota Century Code section 23.1-04-08;

(3) Authorized to manage hazardous waste by a state;

(4) Permitted, licensed, or registered by a state to manage municipal solid waste, and if managed in a municipal solid waste landfill subject to article 33.1-20 or other regulation equivalent to 40 CFR part 258;

(5) Permitted, licensed, or registered by a state to manage nonmunicipal nonhazardous waste and, if managed in a nonmunicipal nonhazardous waste landfill after January 1, 1998, is subject to article 33.1-20 or other regulation equivalent to sections 5 through 30 of 40 CFR part 257;

(6) A facility which:

(a) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(b) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(7) For universal waste managed under sections 33.1-24-05-700 through 33.1-24-05-799, a universal waste handler or destination facility subject to the requirements of sections 33.1-24-05-700 through 33.1-24-05-799.

[NOTE: Although provisions of this subsection exclude certain generators from full regulation under this section, all applicable provisions of article 33.1-20, North Dakota solid waste management rules apply.]

7. In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of one hundred kilograms or less of hazardous waste during a calendar month to be excluded from full regulation under this section, the generator shall comply with the following requirements:

a. Section 33.1-24-03-02.

b. The conditionally exempt small quantity generator may accumulate hazardous waste onsite. If the generator accumulates at any time one thousand kilograms or greater of the generator's hazardous waste, all of those accumulated wastes are subject to regulation under special provisions of chapter 33.1-24-03 applicable to generators of greater than one hundred kilograms and less than one thousand kilograms of hazardous waste in a calendar month as well as the requirements of chapters 33.1-24-03 through 33.1-24-07 and the applicable notification requirements. The time period of subsection 4 of section 33.1-24-03-12 for accumulation of wastes onsite begins for a conditionally exempt small quantity generator when the accumulated wastes equal or exceed one thousand kilograms;

c. A conditionally exempt small quantity generator may either treat or dispose of the generator's hazardous waste in an onsite facility, or ensure delivery to an offsite storage, treatment, or disposal facility, either of which, if located in the United States, is:

(1) Permitted under chapter 33.1-24-06;

(2) In interim status under North Dakota Century Code section 23.1-04-08;

(3) Authorized to manage hazardous waste by a state;

(4) Permitted, licensed, or registered by a state to manage municipal solid waste and, if managed in a municipal solid waste landfill subject to article 33.1-20 or other regulation equivalent to 40 CFR part 258;

(5) Permitted, licensed, or registered by a state to manage nonmunicipal nonhazardous waste and, if managed in a nonmunicipal nonhazardous waste disposal unit after January 1, 1998, is subject to article 33.1-20 or other regulation equivalent to sections 5 through 30 of 40 CFR part 257; or

(6) A facility which:

(a) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(b) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(7) For universal waste managed under sections 33.1-24-05-700 through 33.1-24-05-799, a universal waste handler or destination facility subject to the requirements of sections 33.1-24-05-700 through 33.1-24-05-799.

[NOTE: Although provisions of this subsection exclude certain generators from full regulation under this section, all applicable provisions of article 33.1-20, North Dakota solid waste management rules apply.]

8. Hazardous waste subject to the reduced requirements of this section may be mixed with nonhazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14.

9. If any person mixes a solid waste with a hazardous waste that exceeds the quantity exclusion level of this section, the mixture is subject to full regulation.

10. If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to sections 33.1-24-05-600 through 33.1-24-05-689. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-06. Requirements for recyclable materials and universal waste.

1. The following requirements for recyclable materials are:

a. Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of subsections 2 and 3, except for the materials listed in subdivisions b and c. Hazardous wastes that are recycled will be known as "recyclable materials".

b. The following recyclable materials are not subject to the requirements of this section but are regulated under sections 33.1-24-05-201 through 33.1-24-05-209, 33.1-24-05-230 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, 33.1-24-05-820 through 33.1-24-05-929 and all applicable provisions in sections 33.1-24-05-250 through 33.1-24-05-299 and chapters 33.1-24-06 and 33.1-24-07:

(1) Recyclable materials used in a manner constituting disposal (sections 33.1-24-05-201 through 33.1-24-05-209).

(2) Hazardous wastes burned (as defined in subsection 1 of section 33.1-24-05-525) in boilers and industrial furnaces that are not regulated under sections 33.1-24-05-144 through 33.1-24-05-151 (sections 33.1-24-05-525 through 33.1-24-05-549).

(3) Recyclable materials from which precious metals are reclaimed (sections 33.1-24-05-230 through 33.1-24-05-234).

(4) Spent lead-acid batteries that are being reclaimed (sections 33.1-24-05-235 through 33.1-24-05-249).

c. The following recyclable materials are not subject to regulation under chapters 33.1-24-03 through 33.1-24-07 and are not subject to notification requirements:

(1) Industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in section 33.1-24-03-25:

(a) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in section 33.1-24-03-20, subdivisions a through d and f of subsection 1 and subsection 2 of section 33.1-24-03-23, and section 33.1-24-03-24, export such materials only upon consent of the receiving country and in conformance with the environmental protection agency acknowledgment of consent as defined in sections 33.1-24-03-17 through 33.1-24-03-25, and provide a copy of the environmental protection agency acknowledgment of consent to the shipment to the transporter transporting the shipment for export.

(b) Transporters transporting a shipment for export may not accept a shipment if the transporter knows the shipment does not conform to the environmental protection agency acknowledgment of consent, shall ensure that a copy of the environmental protection agency acknowledgment of consent accompanies the

shipment, and shall ensure that it is delivered to the facility designated by the person initiating the shipment.

(2) Scrap metal that is not excluded under subdivision m of subsection 1 of section 33.1-24-02-04.

(3) Fuels produced from the refining of oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility, if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, when such recovered oil is already excluded under subdivision l of subsection 1 of section 33.1-24-02-04).

(4) Subdivision c also applies to the following:

(a) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, when such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under section 33.1-24-05-611 and so long as no other hazardous wastes are used to produce the hazardous waste fuel;

(b) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining, production, and transportation practices, when such hazardous wastes are reintroduced into a refining process after a point in which contaminants are removed, so long as the fuel meets the used oil fuel specification under section 33.1-24-05-611; and

(c) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under section 33.1-24-05-611.

d. Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of chapters 33.1-24-01 through 33.1-24-04, and sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-1149, and subsection 5 of section 33.1-24-06-16, but is regulated under sections 33.1-24-05-600 through 33.1-24-05-689. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed.

e. Hazardous waste that is exported to or imported from designated member countries of the organization for economic cooperation and development (as defined in subdivision a of subsection 1 of section 33.1-24-03-25) for purpose of recovery is subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59, if it is subject to either the manifesting requirements of chapter 33.1-24-03 or to the universal waste requirements of sections 33.1-24-05-700 through 33.1-24-05-799.

2. Generators and transporters of recyclable materials are subject to the applicable requirements of chapters 33.1-24-03 and 33.1-24-04 and the notification requirements, except as provided in subsection 1.

3. Owners or operators of facilities that:

a. Store recyclable materials before they are recycled are regulated under all applicable provisions of sections 33.1-24-05-01 through 33.1-24-05-143, sections 33.1-24-05-191 through 33.1-24-05-299, sections 33.1-24-05-400 through 33.1-24-05-474, 33.1-24-05-525 through 33.1-24-05-549, sections 33.1-24-05-820 through 33.1-24-05-1149, and chapters 33.1-24-06 and 33.1-24-07 and the notification requirements, under section 33.1-24-03-03, except as provided in subsection 1. The recycling process itself is exempt from regulation except as provided in subsection 4 of section 33.1-24-02-06.

b. Recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in subsection 1:

(1) Notification requirements;

(2) Sections 33.1-24-05-38 and 33.1-24-05-39 (dealing with the use of the manifest and manifest discrepancies); and

(3) Subsection 4 of section 33.1-24-02-06.

4. Owners or operators of facilities subject to the hazardous waste permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of sections 33.1-24-05-400 through 33.1-24-05-449, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-05-950 through 33.1-24-05-1149.

5. The wastes listed in this subsection are exempt from regulation under chapters 33.1-24-03 through 33.1-24-06 except as specified in sections 33.1-24-05-700 through 33.1-24-05-799 and, therefore are not fully regulated as hazardous waste. The wastes listed in this subsection are subject to regulation under sections 33.1-24-05-700 through 33.1-24-05-799:

a. Batteries as described in section 33.1-24-05-702;

b. Pesticides as described in section 33.1-24-05-703;

c. Mercury-containing equipment as described in section 33.1-24-05-704; and

d. Lamps as described in 33.1-24-05-705.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-07. Residues of hazardous wastes in empty containers.

1. Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container, as defined in subsections 3, 4, and 5, is not subject to regulation under chapters 33.1-24-02 through 33.1-24-07 or to the notification requirements of section 33.1-24-03-03.

2. Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as defined in subsections 3, 4, and 5, is subject to regulation under chapters 33.1-24-02 through 33.1-24-07 and to the notification requirements of section 33.1-24-03-03.

3. A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in section 33.1-24-02-16, or subsection 5 of section 33.1-24-02-18, is empty if:

a. All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, for example, pouring, pumping, and aspirating; and

b. One of the following:

(1) No more than two and one-half centimeters [1 inch] of residue remain on the bottom of the container or inner liner;

(2) No more than three percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to one hundred nineteen gallons in size; or

(3) No more than three-tenths of one percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than one hundred nineteen gallons in size.

4. A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

5. A container or an inner liner removed from a container that has held an acute hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 is empty if:

a. The container or inner liner has been triple-rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

b. The container or inner liner has been cleaned by another method that has been shown in the scientific literature or by tests conducted by the generator, to achieve equivalent removal; or

c. In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-08. Criteria for identifying the characteristics of hazardous waste.

The department shall identify and define a characteristic of hazardous waste in this chapter only upon determining that:

1. A solid waste that exhibits the characteristic may:

a. Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

b. Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of, or otherwise managed; and

2. The characteristic can be:

a. Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or

b. Reasonably detected by generators of solid waste through their knowledge of their waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-09. Criteria for listing hazardous waste.

1. The department shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:

a. It exhibits any of the characteristics of hazardous waste identified in this chapter.

b. It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than fifty milligrams per kilogram, and inhalation LC 50 toxicity (rat) of less than two milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than two hundred milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated acute hazardous waste.)

c. It contains any of the toxic constituents listed in appendix V and, after considering the following factors, the department concludes that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed:

(1) The nature of the toxicity presented by the constituent;

(2) The concentration of the constituent in the waste;

(3) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph 7;

(4) The persistence of the constituent or any toxic degradation product of the constituent;

(5) The potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation;

(6) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems;

(7) The plausible types of improper management to which the waste could be subjected;

(8) The quantities of the waste generated at individual generation sites or on a statewide basis;

(9) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent;

(10) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent; and

(11) Such other factors as may be appropriate.

Substances will be listed on appendix V only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on human or other life forms. (Wastes listed in accordance with these criteria will be designated toxic wastes.)

2. The department may list classes or types of solid waste as hazardous wastes if it has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in subsection 6 of North Dakota Century Code section 23.1-04-02.
3. The department will use the criteria for listing specified in this section to establish the exclusion limits referred to in subsection 3 of section 33.1-24-02-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-10. General characteristics of hazardous waste.

1. A solid waste, as defined in section 33.1-24-02-02, which is not excluded from regulation as a hazardous waste under subsection 2 of section 33.1-24-02-04 is a hazardous waste if it exhibits any of the characteristics identified in this chapter. (Comment: Section 33.1-24-03-02 sets forth the generator's responsibility to determine whether the generator's waste exhibits one or more of the characteristics identified in this chapter.)
2. A hazardous waste which is identified by a characteristic in sections 33.1-24-02-10 through 33.1-24-02-14 is assigned every hazardous waste number that is applicable as set forth in this chapter. This number must be used in complying with the notification requirements and all applicable recordkeeping and reporting requirements under chapters 33.1-24-03 through 33.1-24-06.
3. For purposes of sections 33.1-24-02-10 through 33.1-24-02-14, the department will consider a sample obtained using any of the applicable sampling methods specified in appendix I to be a representative sample within the meaning of chapter 33.1-24-01.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-11. Characteristic of ignitability.

1. A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
 - a. It is a liquid, other than an aqueous solution containing less than twenty-four percent alcohol by volume, and has a flashpoint less than sixty degrees Celsius [140 degrees Fahrenheit], as determined by a Pensky-Martins closed cup tester, using the test method specified in American Society for Testing and Material Standard D93-79 or D93-80 (incorporated by reference, see section 33.1-24-01-05), or a setaflash closed cup tester, using the test method specified in American Society for Testing and Material Standard D3278-78 (incorporated by reference, see section 33.1-24-01-05), or a miniflash continuously closed cup tester, using the test method specified in American Society for Testing and Material D6450-99 (incorporated by reference in section 33.1-24-01-05).
 - b. It is not a liquid and is capable, under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously that it creates a hazard.
 - c. It is an ignitable compressed gas.

(1) The term "compressed gas" shall designate any material or mixture having in the container an absolute pressure exceeding forty pounds per square inch at seventy degrees Fahrenheit or, regardless of the pressure at seventy degrees Fahrenheit, having an absolute pressure exceeding one hundred four pounds per square inch at one hundred thirty degrees Fahrenheit; or any liquid flammable material having a vapor pressure exceeding forty pounds per square inch absolute at one hundred degrees Fahrenheit as determined by ASTM Test D323.

(2) A compressed gas shall be characterized as ignitable if any one of the following occurs:

(a) Either a mixture of thirteen percent or less (by volume) with air forms a flammable mixture or the flammable range with air is wider than twelve percent regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure. The method of sampling and test procedure shall be acceptable to the bureau of explosives and approved by the director, pipeline and hazardous materials technology, United States department of transportation (see note 2).

(b) Using the bureau of explosives' flame projection apparatus (see note 1), the flame projects more than eighteen inches beyond the ignition source with valve opened fully, or, the flame flashes back and burns at the valve with any degree of valve opening.

(c) Using the bureau of explosives' open drum apparatus (see note 1), there is any significant propagation of flame away from the ignition source.

(d) Using the bureau of explosives' closed drum apparatus (see note 1), there is any explosion of the vapor-air mixture in the drum.

d. It is an oxidizer. An oxidizer for the purpose of this section is a substance such as a chlorate, permanganate, inorganic peroxide, or a nitrate, that yields oxygen readily to stimulate the combustion of organic matter (see note 4).

(1) An organic compound containing the bivalent -O-O- structure and which may be considered a derivative of hydrogen peroxide where one or more of the hydrogen atoms have been replaced by organic radicals must be classed as an organic peroxide unless:

(a) The material meets the definition of a division 1.1, 1.2, or 1.3 explosive, as defined in subdivision h of subsection 1 of section 33.1-24-02-13, in which case it must be classed as an explosive;

(b) The material is forbidden to be offered for transportation according to 49 CFR 172.101 and 49 CFR 173.21;

(c) It is determined that the predominant hazard of the material containing an organic peroxide is other than that of an organic peroxide; or

(d) According to data on file with the pipeline and hazardous materials safety administration in the United States department of transportation (see note 3), it has been determined that the material does not present a hazard in transportation.

2. A solid waste that exhibits the characteristic of ignitability has the hazardous waste number of D001.

Note 1: A description of the bureau of explosives' flame projection apparatus, open drum apparatus, closed drum apparatus, and method of tests may be procured from the bureau of explosives.

Note 2: As part of a United States department of transportation reorganization, the office of hazardous materials technology, which was the office listed in the 1980 publication of 49 CFR 173.300 for the purposes of approving sampling and test procedures for a flammable gas, ceased operations on February 20, 2005. Office of hazardous materials technology programs have moved to the pipeline and hazardous materials safety administration in the department of transportation.

Note 3: As part of a United States department of transportation reorganization, the research and special programs' administration, which was the office listed in the 1980 publication of 49 CFR 173.151a for the purposes of determining that a material does not present a hazard in transport, ceased operations on February 20, 2005. Research and special programs' administration programs have moved to the pipeline and hazardous materials safety administration in the department of transportation.

Note 4: The department of transportation regulatory definition of an oxidizer was contained in section 173.151 of 49 CFR, and the definition of an organic peroxide was contained in paragraph 173.151a. An organic peroxide is a type of oxidizer.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-12. Characteristic of corrosivity.

1. A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
 - a. It is aqueous and has a pH less than or equal to two or greater than or equal to twelve and five-tenths, as determined by a pH meter, using method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05.
 - b. It is a liquid and corrodes steel (SAE 1020) at a rate greater than six and thirty-five-hundredths millimeters [0.250 inch] per year at a test temperature of fifty-five degrees Celsius [130 degrees Fahrenheit] as determined by the method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, and as incorporated by reference in section 33.1-24-01-05.
2. A solid waste that exhibits the characteristic of corrosivity has the hazardous waste number of D002.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-13. Characteristic of reactivity.

1. A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:
 - a. It is normally unstable and readily undergoes violent change without detonating.
 - b. It reacts violently with water.

- c. It forms potentially explosive mixtures with water.
- d. When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.
- e. It is a cyanide-bearing or sulfide-bearing waste which, when exposed to pH conditions between two and twelve and five-tenths, can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.
- f. It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- g. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- h. It is a forbidden explosive as defined in 49 CFR 173.54, or is a division 1.1, 1.2, or 1.3 explosive as defined in 49 CFR 173.50 and 173.53.

- 2. A solid waste that exhibits the characteristic of reactivity has the hazardous waste number of D003.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-14. Toxicity characteristic.

- 1. A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using the toxicity characteristic leaching procedure, test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05, the extract from a representative sample of the waste contains any of the contaminants listed in table 1 at the concentration equal to or greater than the respective value given in that table. If the waste contains less than one-half of one percent filterable solids, the waste itself, after filtering using the methodology outlined in method 1311, is considered to be the extract for the purposes of this section.
- 2. A solid waste that exhibits the characteristic of toxicity has the hazardous waste number specified in table 1 which corresponds to the toxic contaminant causing it to be hazardous.

<u>Table 1. Maximum Concentration of Contaminants for the Toxicity Characteristic</u>			
<u>EPA HW No.¹</u>	<u>Contaminant</u>	<u>CAS No.²</u>	<u>Regulatory Level (mg/l)</u>
<u>D004</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>5.0</u>
<u>D005</u>	<u>Barium</u>	<u>7440-39-3</u>	<u>100.0</u>
<u>D018</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.5</u>
<u>D006</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>1.0</u>
<u>D019</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.5</u>
<u>D020</u>	<u>Chlordane</u>	<u>57-74-9</u>	<u>0.03</u>
<u>D021</u>	<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>100.0</u>
<u>D022</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>6.0</u>

<u>D007</u>	<u>Chromium</u>	<u>7440-47-3</u>	<u>5.0</u>
<u>D023</u>	<u>o-Cresol</u>	<u>95-48-7</u>	<u>⁴200.0</u>
<u>D024</u>	<u>m-Cresol</u>	<u>108-39-4</u>	<u>⁴200.0</u>
<u>D025</u>	<u>p-Cresol</u>	<u>106-44-5</u>	<u>⁴200.0</u>
<u>D026</u>	<u>Cresol</u>	<u>.....</u>	<u>⁴200.0</u>
<u>D016</u>	<u>2,4-D</u>	<u>94-75-7</u>	<u>10.0</u>
<u>D027</u>	<u>1,4-Dichlorobenzene</u>	<u>106-46-7</u>	<u>7.5</u>
<u>D028</u>	<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.5</u>
<u>D029</u>	<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.7</u>
<u>D030</u>	<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>³0.13</u>
<u>D012</u>	<u>Endrin</u>	<u>72-20-8</u>	<u>0.02</u>
<u>D031</u>	<u>Heptachlor (and its epoxide)</u>	<u>76-44-8</u>	<u>0.008</u>
<u>D032</u>	<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>³0.13</u>
<u>D033</u>	<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.5</u>
<u>D034</u>	<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>3.0</u>
<u>D008</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>5.0</u>
<u>D013</u>	<u>Lindane</u>	<u>58-89-9</u>	<u>0.4</u>
<u>D009</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>0.2</u>
<u>D014</u>	<u>Methoxychlor</u>	<u>72-43-5</u>	<u>10.0</u>
<u>D035</u>	<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>200.0</u>
<u>D036</u>	<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>2.0</u>
<u>D037</u>	<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>100.0</u>
<u>D038</u>	<u>Pyridine</u>	<u>110-86-1</u>	<u>³5.0</u>
<u>D010</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>1.0</u>
<u>D011</u>	<u>Silver</u>	<u>7440-22-4</u>	<u>5.0</u>
<u>D039</u>	<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.7</u>
<u>D015</u>	<u>Toxaphene</u>	<u>8001-35-2</u>	<u>0.5</u>
<u>D040</u>	<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.5</u>
<u>D041</u>	<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>400.0</u>
<u>D042</u>	<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>2.0</u>
<u>D017</u>	<u>2,4,5-TP (Silvex)</u>	<u>93-72-1</u>	<u>1.0</u>
<u>D043</u>	<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.2</u>

¹Hazardous waste number.

²Chemical abstracts service number.

³Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

⁴If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-15. Lists of hazardous wastes.

1. A solid waste is a hazardous waste if it is listed in sections 33.1-24-02-15 through 33.1-24-02-19, unless it has been excluded from these lists under section 33.1-24-01-06 or 33.1-24-01-08.
2. The department will indicate its basis for listing the classes or types of wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19 by employing one or more of the following hazard codes:

<u>Waste Type</u>	<u>Waste Hazard Code</u>
<u>Ignitable Waste</u>	<u>(I)</u>
<u>Corrosive Waste</u>	<u>(C)</u>
<u>Reactive Waste</u>	<u>(R)</u>
<u>Toxicity Characteristic Waste</u>	<u>(E)</u>
<u>Acute Hazardous Waste</u>	<u>(H)</u>
<u>Toxic Waste</u>	<u>(T)</u>

Appendix IV identifies the constituent which caused the waste to be listed as a toxicity characteristic waste (E) or toxic wastes (T) in sections 33.1-24-02-16 and 33.1-24-02-17.

3. Each hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 is assigned a hazardous waste number which precedes the name of the waste. The number must be used in complying with the notification requirements and certain recordkeeping and reporting requirements under chapters 33.1-24-03 through 33.1-24-06.
4. The following hazardous wastes listed in section 33.1-24-02-16 are subject to the exclusion limits for acutely hazardous wastes established in section 33.1-24-02-05: hazardous waste numbers F020, F021, F022, F023, F026, and F027.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-16. Hazardous waste from nonspecific sources.

1. The following solid wastes are listed hazardous wastes from nonspecific sources unless they are excluded under sections 33.1-24-01-06 and 33.1-24-01-08 and listed in appendix VI.

<u>Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
<u>Generic:</u>		
<u>F001</u>	<u>The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or</u>	<u>(T)</u>

more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

- F002 The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (T)
- F003 The following spent nonhalogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (I)*
- F004 The following spent nonhalogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of the above nonhalogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (T)
- F005 The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (I, T)
- F006 Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. (T)
- F007 Spent cyanide plating bath solutions from electroplating operations. (R, T)

<u>F008</u>	<u>Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.</u>	<u>(R, T)</u>
<u>F009</u>	<u>Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.</u>	<u>(R, T)</u>
<u>F010</u>	<u>Quenching bath residue from oil baths from metal heat treating operations where cyanides are used in the process.</u>	<u>(R, T)</u>
<u>F011</u>	<u>Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.</u>	<u>(R, T)</u>
<u>F012</u>	<u>Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.</u>	<u>(T)</u>
<u>F019</u>	<u>Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed outside on the land prior to shipment to a landfill for disposal and are either: disposed in a subtitle D municipal or industrial landfill unit that is equipped with a single clay liner and is permitted, licensed or otherwise authorized by the department; or disposed in a landfill unit subject to, or otherwise meeting, the landfill requirements in 40 CFR 258.40, section 33.1-24-05-177, or subsection 5 of section 33.1-24-06-16. For the purposes of this listing, motor vehicle manufacturing is defined in paragraph 1 of subdivision d of subsection 2, and paragraph 2 of subdivision d of subsection 2, describes the recordkeeping requirements for motor vehicle manufacturing facilities.</u>	<u>(T)</u>
<u>F020</u>	<u>Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) or tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)</u>	<u>(H)</u>
<u>F021</u>	<u>Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.</u>	<u>(H)</u>
<u>F022</u>	<u>Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.</u>	<u>(H)</u>
<u>F023</u>	<u>Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or</u>	<u>(H)</u>

- manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)
- F024 Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in section 33.1-24-02-16 or 33.1-24-02-17. (T)
- F025 Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (T)
- F026 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions. (H)
- F027 Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component). (H)
- F028 Residues resulting from the incineration or thermal treatment of soil contaminated with environmental protection agency hazardous waste numbers F020, F021, F022, F023, F026, and F027. (T)
- *F032 Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with section 33.1-24-02-19 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes, for example, F034 or F035, and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol, or both. (T)

- *F034 Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol, or both. (T)
- *F035 Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol, or both. (T)
- F037 Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow, sludge generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in subdivision b of subsection 2 of section 33.1-24-02-16 (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under paragraph 1 of subdivision l of subsection 1 of section 33.1-24-02-04, if those residuals are to be disposed of. (T)
- F038 Petroleum refinery secondary (emulsified) oil/water/solids separation sludge - Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in dissolved air flotation (DAF) units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in subdivision b of subsection 2 (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological (T)

treatment units) and F037, K048, and K051 wastes are not included in this listing.

F039 Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under sections 33.1-24-02-15 through 33.1-24-02-19. (Leachate resulting from the disposal of one or more of the following hazardous wastes and no other hazardous wastes retains its hazardous waste numbers: F020, F021, F022, F026, F027, and/or F028.) (T)

*(I,T) should be used to specify mixtures that are ignitable and contain toxic constituents.

2. Listing specific definitions:

a. For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil, water, or solids or any combination of them.

b. Aggressive biological treatment units are:

(1) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter; rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity; and

(a) The unit employs a minimum of six horsepower per million gallons of treatment volume; and either

(b) The hydraulic retention time of the unit is no longer than five days; or

(c) The hydraulic retention time is no longer than thirty days and the unit does not generate a sludge that is a hazardous waste by the toxicity characteristic.

(2) Generators and treatment, storage, and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage, and disposal facilities must maintain, in their operating or other onsite records, documents, and data sufficient to prove that:

(a) The unit is an aggressive biological treatment unit as defined in this subsection; and

(b) The sludges sought to be exempted from the definitions of F037 or F038, or both, were actually generated in the aggressive biological treatment unit.

c. Sludges are:

(1) For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(2) For the purposes of the F038 listing:

(a) Sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement; and

(b) Floats are considered to be generated at the moment they are formed in the top of the unit.

d. For the purposes of the F019 listing, the following apply to wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process.

(1) Motor vehicle manufacturing is defined to include the manufacture of automobiles, light trucks, and utility vehicles (including light duty vans, pickup trucks, minivans, and sport utility vehicles). Facilities must be engaged in manufacturing complete vehicles (body and chassis or unibody) or chassis only.

(2) Generators must maintain in their onsite records documentation and information sufficient to prove that the wastewater treatment sludges to be exempted from the F019 listing meet the conditions of the listing. These records must include: the volume of waste generated and disposed of offsite, documentation showing when the waste volumes were generated and sent offsite, the name and address of the receiving facility, and documentation confirming receipt of the waste by the receiving facility. Generators must maintain these documents onsite for no less than three years. The retention period for the documentation is automatically extended during the course of any enforcement action or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-17. Hazardous waste from specific sources.

1. The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under sections 33.1-24-01-06 and 33.1-24-01-08 and listed in appendix VI.

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
<u>Wood Preservation:</u>		
K001	<u>Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.</u>	(T)
<u>Inorganic Pigments:</u>		
K002	<u>Wastewater treatment sludge from the production of chrome yellow and orange pigments.</u>	(T)
K003	<u>Wastewater treatment sludge from the production of molybdate orange pigments.</u>	(T)
K004	<u>Wastewater treatment sludge from the production of zinc yellow pigments.</u>	(T)
K005	<u>Wastewater treatment sludge from the production of chrome green pigments.</u>	(T)
K006	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).</u>	(T)
K007	<u>Wastewater treatment sludge from the production of iron blue pigments.</u>	(T)
K008	<u>Oven residue from the production of chrome oxide green pigments.</u>	(T)
<u>Organic Chemicals:</u>		
K009	<u>Distillation bottoms from the production of acetaldehyde from ethylene.</u>	(T)
K010	<u>Distillation side cuts from the production of acetaldehyde from ethylene.</u>	(T)
K011	<u>Bottom stream from the wastewater stripper in the production of acrylonitrile.</u>	(R, T)

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
K013	<u>Bottom stream from the acetonitrile column in the production of acrylonitrile.</u>	(R, T)
K014	<u>Bottoms from the acetonitrile purification column in the production of acrylonitrile.</u>	(T)
K015	<u>Still bottoms from the distillation of benzyl chloride.</u>	(T)
K016	<u>Heavy ends or distillation residues from the production of carbon tetrachloride.</u>	(T)
K017	<u>Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.</u>	(T)
K018	<u>Heavy ends from the fractionation column in ethyl chloride production.</u>	(T)
K019	<u>Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.</u>	(T)
K020	<u>Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.</u>	(T)
K021	<u>Aqueous spent antimony catalyst waste from fluoromethanes production.</u>	(T)
K022	<u>Distillation bottom tars from the production of phenol/acetone from cumene.</u>	(T)
K023	<u>Distillation light ends from the production of phthalic anhydride from naphthalene.</u>	(T)
K024	<u>Distillation bottoms from the production of phthalic anhydride from naphthalene.</u>	(T)
K025	<u>Distillation bottoms from the production of nitrobenzene by the nitration of benzene.</u>	(T)
K026	<u>Stripping still tails from the production of methyl ethyl pyridines.</u>	(T)
K027	<u>Centrifuge and distillation residues from toluene diisocyanate production.</u>	(R, T)
K028	<u>Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.</u>	(T)
K029	<u>Waste from the product steam stripper in the production of 1,1,1-trichloroethane.</u>	(T)
K030	<u>Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.</u>	(T)
K083	<u>Distillation bottoms from aniline production.</u>	(T)
K085	<u>Distillation or fractionation column bottoms from the production of chlorobenzenes.</u>	(T)
K093	<u>Distillation light ends from the production of phthalic anhydride from ortho-xylene.</u>	(T)
K094	<u>Distillation bottoms from the production of phthalic anhydride from ortho-xylene.</u>	(T)
K095	<u>Distillation bottoms from the production of 1,1,1-trichloroethane.</u>	(T)
K096	<u>Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.</u>	(T)
K103	<u>Process residues from aniline extraction from the production of aniline.</u>	(T)
K104	<u>Combined wastewater streams generated from nitrobenzene/aniline production.</u>	(T)
K105	<u>Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.</u>	(T)

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
K107	<u>Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	(C,T)
K108	<u>Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	(I,T)
K109	<u>Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	(T)
K110	<u>Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	(T)
K111	<u>Product washwaters from the production of dinitrotoluene via nitration of toluene.</u>	(C,T)
K112	<u>Reaction byproduct water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	(T)
K113	<u>Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	(T)
K114	<u>Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	(T)
K115	<u>Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	(T)
K116	<u>Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.</u>	(T)
K117	<u>Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.</u>	(T)
K118	<u>Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.</u>	(T)
K136	<u>Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.</u>	(T)
K149	<u>Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (this waste does not include still bottoms from the distillation of benzyl chloride).</u>	(T)
K150	<u>Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.</u>	(T)
K151	<u>Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.</u>	(T)
K156	<u>Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	(T)
K157	<u>Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	(T)

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
<u>K158</u>	<u>Baghouse dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	(T)
<u>K159</u>	<u>Organics from the treatment of thiocarbamate wastes.</u>	(T)
<u>K161</u>	<u>Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.)</u>	(R, T)
<u>K174</u>	<u>Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (1) the wastes are disposed of in a hazardous waste or nonhazardous waste landfill licensed or permitted by the state or federal government; (2) the wastes are not otherwise placed on the land prior to final disposal; and (3) the generator maintains documentation demonstrating that the waste was either disposed of in an onsite landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an offsite landfill. Respondents in any action brought to enforce the requirements of article 33.1-24 must, upon a showing by the department that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that the respondent meet the terms of the exclusion set forth above. In doing so, the respondents must provide appropriate documentation (for example, contracts between the generator and the landfill owner or operator, invoices documenting delivery of waste to landfill, etc.) that the terms of the exclusion were met.</u>	(T)
<u>K175</u>	<u>Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process.</u>	(T)
<u>K181</u>	<u>Nonwastewaters from the production of dyes or pigment, or both, (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in subsection 3 that are equal to or greater than the corresponding subsection 3 levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (1) disposed in a nonhazardous waste landfill unit subject to the design criteria in section 33.1-20-06.1-02, (2) disposed in a hazardous waste landfill unit subject to either section 33.1-24-05-177 or subsection 5 of section 33.1-24-06-16, (3) disposed in other nonhazardous waste landfill units that meet the design criteria in section 33.1-20-06.1-02, section 33.1-24-05-177, or subsection 5 of section 33.1-24-06-16, or (4) treated in a combustion unit that is permitted under the hazardous waste management rules, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes or pigment, or both, production is defined in subdivision a of subsection 2. Subsection 4 describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under sections 33.1-24-02-11 through 33.1-24-02-14 and sections 33.1-24-02-16 through 33.1-24-02-18 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met.</u>	(T)
<u>Inorganic Chemicals:</u>		
<u>K071</u>	<u>Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.</u>	(T)
<u>K073</u>	<u>Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.</u>	

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
K106	<u>Wastewater treatment sludge from the mercury cell process in chlorine production.</u>	(T)
K176	<u>Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (for example, antimony metal or crude antimony oxide).</u>	(E)
K177	<u>Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (for example, antimony metal or crude antimony oxide).</u>	(T)
K178	<u>Residues from manufacturing and manufacturing-site storage of ferricchloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process.</u>	(T)
<u>Pesticides:</u>		
K031	<u>Byproduct salts generated in the production of MSMA and cacodylic acid.</u>	(T)
K032	<u>Wastewater treatment sludge from the production of chlordane.</u>	(T)
K033	<u>Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.</u>	(T)
K034	<u>Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.</u>	(T)
K035	<u>Wastewater treatment sludges generated in the production of creosote.</u>	(T)
K036	<u>Still bottoms from toluene reclamation distillation in the production of disulfoton.</u>	(T)
K037	<u>Wastewater treatment sludges from the production of disulfoton.</u>	(T)
K038	<u>Wastewater from the washing and stripping of phorate production.</u>	(T)
K039	<u>Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.</u>	(T)
K040	<u>Wastewater treatment sludge from the production of phorate.</u>	(T)
K041	<u>Wastewater treatment sludge from the production of toxaphene.</u>	(T)
K042	<u>Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.</u>	(T)
K043	<u>2,6-Dichlorophenol waste from the production 2,4-D.</u>	(T)
K097	<u>Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.</u>	(T)
K098	<u>Untreated process wastewater from the production of toxaphene.</u>	(T)
K099	<u>Untreated wastewater from the production of 2,4-D.</u>	(T)
K123	<u>Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt.</u>	(T)
K124	<u>Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.</u>	(C, T)
K125	<u>Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.</u>	(T)
K126	<u>Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.</u>	(T)
K131	<u>Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.</u>	(C, T)
K132	<u>Spent absorbent and wastewater separator solids from the production of methyl bromide.</u>	(T)

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
<u>Explosives:</u>		
K044	<u>Wastewater treatment sludges from the manufacturing and processing of explosives.</u>	(R)
K045	<u>Spent carbon from the treatment of wastewater containing explosives.</u>	(R)
K046	<u>Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.</u>	(T)
K047	<u>Pink/red water from TNT operations.</u>	(R)
<u>Petroleum Refining:</u>		
K048	<u>Dissolved air flotation (DAF) float from the petroleum refining industry.</u>	(T)
K049	<u>Slop oil emulsion solids from the petroleum refining industry.</u>	(T)
K050	<u>Heat exchanger bundle cleaning sludge from the petroleum refining industry.</u>	(T)
K051	<u>API separator sludge from the petroleum refining industry.</u>	(T)
K052	<u>Tank bottoms (leaded) from the petroleum refining industry.</u>	(T)
K169	<u>Crude oil storage tank sediment from petroleum refining operations.</u>	(T)
K170	<u>Clarified slurry oil tank sediment or in-line filter/separation solids, or both, from petroleum refining operations.</u>	(T)
K171	<u>Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).</u>	(I, T)
K172	<u>Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).</u>	(I, T)
<u>Iron and Steel:</u>		
K061	<u>Emission control dust/sludge from the primary production of steel in electric furnaces.</u>	(T)
K062	<u>Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).</u>	(C, T)
<u>Primary Aluminum:</u>		
K088	<u>Spent potliners from primary aluminum reduction.</u>	(T)
<u>Secondary Lead:</u>		
K069	<u>Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay, EPA will publish a notice of the action in the Federal Register).</u>	(T)
K100	<u>Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.</u>	(T)
<u>Veterinary Pharmaceuticals:</u>		
K084	<u>Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	(T)
K101	<u>Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	(T)

<u>Industry and Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Hazard Code</u>
<u>K102</u>	<u>Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	<u>(T)</u>
<u>Ink Formulation:</u>		
<u>K086</u>	<u>Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.</u>	<u>(T)</u>
<u>Coking:</u>		
<u>K060</u>	<u>Ammonia still lime sludge from coking operations.</u>	<u>(T)</u>
<u>K087</u>	<u>Decanter tank tar sludge from coking operations.</u>	<u>(T)</u>
<u>K141</u>	<u>Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke byproducts produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).</u>	<u>(T)</u>
<u>K142</u>	<u>Tar storage tank residues from the production of coke from coal or from the recovery of coke byproducts produced from coal.</u>	<u>(T)</u>
<u>K143</u>	<u>Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke byproducts produced from coal.</u>	<u>(T)</u>
<u>K144</u>	<u>Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke byproducts produced from coal.</u>	<u>(T)</u>
<u>K145</u>	<u>Residues from naphthalene collection and recovery operations from the recovery of coke byproducts produced from coal.</u>	<u>(T)</u>
<u>K147</u>	<u>Tar storage tank residues from coal tar refining.</u>	<u>(T)</u>
<u>K148</u>	<u>Residues from coal tar distillation, including but not limited to, still bottoms.</u>	<u>(T)</u>

2. Listing Specific Definitions:

a. For the purposes of the K181 listing, dyes or pigment, or both, production is defined to include manufacture of the following product classes: dyes, pigments, or food and drug administration certified colors that are classified as azo, triarylmethane, perylene, or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products. Triarylmethane products include both triarylmethane and triphenylmethane products. Wastes that are not generated at a dyes or pigment, or both, manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes or pigment, or both, are not included in the K181 listing.

b. [Reserved]

3. K181 Listing Levels.

Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met.

<u>Constituent</u>	<u>Chemical Abstracts No.</u>	<u>Mass Levels (Kilograms per Year)</u>
<u>Aniline</u>	<u>62-53-3</u>	<u>9300</u>

<u>o-Anisidine</u>	<u>90-04-0</u>	<u>110</u>
<u>4-Chloroaniline</u>	<u>106-47-8</u>	<u>4800</u>
<u>p-Cresidine</u>	<u>120-71-8</u>	<u>660</u>
<u>2,4-Dimethylaniline</u>	<u>95-68-1</u>	<u>100</u>
<u>1,2-Phenylenediamine</u>	<u>95-54-5</u>	<u>710</u>
<u>1,3-Phenylenediamine</u>	<u>108-45-2</u>	<u>1200</u>

4. Procedures for demonstrating that dyes or pigment, or both, nonwastewaters are not K181. The procedures described in subdivisions a through c and e of this subsection establish when nonwastewaters from the production of dyes or pigment, or both, would not be hazardous (these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in subsection 1). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in subsection 1, then the nonwastewaters are not hazardous. In order to demonstrate that the generator is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator must maintain documentation as described in subdivision d of this subsection.

a. Determination based on no K181 constituents. Generators that have knowledge (for example, knowledge of constituents in wastes based on prior sampling and analysis data or information about raw materials used, prior sampling and analysis data and information about raw materials used, production processes used, and reaction and degradation products formed) that their wastes contain none of the K181 constituents (see subsection 3) can use their knowledge to determine that their waste is not K181. The generator must document the basis for all such determinations on an annual basis and keep each annual documentation for three years.

b. Determination for generated quantities of one thousand metric tons per year or less for wastes that contain K181 constituents. If the total annual quantity of dyes or pigment, or both, nonwastewaters generated is one thousand metric tons or less, the generator can use knowledge of the wastes (for example, knowledge of constituents in wastes based on prior analytical data or information about raw materials used, prior analytical data and information about raw materials used, production processes used, and reaction and degradation products formed) to conclude that annual mass loadings for the K181 constituents are below the subsection 3 listing levels. To make this determination, the generator must:

(1) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than one thousand metric tons.

(2) Track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds one thousand metric tons, the generator must comply with the requirements of subdivision c of this subsection for the remainder of the year.

(3) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(4) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(a) The quantity of dyes or pigment, or both, nonwastewaters generated.

(b) The relevant process information used.

(c) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.

c. Determination for generated quantities greater than one thousand metric tons per year for wastes that contain K181 constituents. If the total annual quantity of dyes or pigment, or both, nonwastewaters generated is greater than one thousand metric tons, the generator must perform all of the steps described in paragraphs 1 through 11 in order to make a determination that the generators waste is not K181.

(1) Determine which K181 constituents (see subsection 3) are reasonably expected to be present in the wastes based on knowledge of the wastes (for example, based on prior sampling and analysis data or information about raw materials used, prior sampling and analysis data and information about raw materials used, production processes used, and reaction and degradation products formed).

(2) If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator must comply with the procedures for using knowledge described in subdivision b and keep the records described in paragraph 4 of subdivision b. For determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described below in this section.

(3) Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:

(a) A discussion of the number of samples needed to characterize the wastes fully;

(b) The planned sample collection method to obtain representative waste samples;

(c) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes; and

(d) A detailed description of the test methods to be used, including sample preparation, clean up (if necessary), and determinative methods.

(4) Collect and analyze samples in accordance with the waste sampling and analysis plan.

(a) The sampling and analysis must be unbiased, precise, and representative of the wastes.

(b) The analytical measurements must be sufficiently sensitive, accurate and precise to support any claim that the constituent mass loadings are below the subsection 3 listing levels.

(5) Record the analytical results.

(6) Record the waste quantity represented by the sampling and analysis results.

(7) Calculate constituent-specific mass loadings (product of concentrations and waste quantity).

(8) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(9) Determine whether the mass of any of the K181 constituents listed in subsection 3 of this section generated between January 1 and December 31 of any year is below the K181 listing levels.

(10) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(a) The sampling and analysis plan.

(b) The sampling and analysis results (including quality assurance and quality control data).

(c) The quantity of dyes or pigment, or both, nonwastewaters generated.

(d) The calculations performed to determine annual mass loadings.

(11) Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.

(a) The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.

(b) The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.

(c) If the annual testing requirements are suspended, the generator must keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change must be retained.

d. Recordkeeping for the landfill disposal and combustion exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator must maintain onsite for three years documentation demonstrating that each shipment of waste was received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.

e. Waste holding and handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the hazardous waste management rules requirements during the interim period, the generator could be subject to an enforcement action for improper management.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-18. Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in paragraph 1 of subdivision b of subsection 1 of section 33.1-24-02-02, when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

1. Any commercial chemical product, manufacturing chemical intermediate, or any mixture of the chemicals having the generic name listed in subsection 5 or 6.
2. Any off-specification commercial chemical product, manufacturing chemical intermediate, or any mixture of the chemicals which, if it met specifications, would have the generic name listed in subsection 5 or 6.
3. Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product, manufacturing chemical intermediate, or any mixture of the chemicals having the generic name listed in subsection 5 or 6, unless the container is empty as defined in subsections 3, 4, and 5 of section 33.1-24-02-07.

(NOTE: Unless the residue is being beneficially used or legitimately recycled or reclaimed; or being accumulated, stored, transported, or treated prior to such use, reuse, recycling, or reclamation, the department considers the residue to be intended for discard, and thus a hazardous waste. An example of a legitimate reuse of the residue would be when the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be when the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.)

4. Any residue or contaminated soil, water, or other debris, resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical product, manufacturing chemical intermediate, or mixture of the chemicals having the generic name listed in subsection 5 or 6, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into or on any land or water of any off-specification chemical product, manufacturing chemical intermediate, or mixture of the chemicals, which, if it met specifications would have the generic name listed in subsection 5 or 6. (Comment: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use, which consists of the commercially pure grade of the chemical, any technical grades of the chemical, that are produced or marketed, and all formulations containing one or more of the chemicals having the generic name listed in subsection 5 or 6 as active ingredients. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in subsection 5 or 6. Where a manufacturing process is deemed to be a hazardous waste because it contains a substance listed in subsection 5 or 6, such wastes will be listed in either section 33.1-24-02-16 or 33.1-24-02-17 or will be identified as a hazardous waste by the characteristics set forth in sections 33.1-24-02-10 through 33.1-24-02-14.)

5. The commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products or manufacturing chemical intermediates, or mixtures of the chemicals referred to in subsections 1 through 4, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in subsection 5 of section 33.1-24-02-05.

[Comment: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (toxicity), and R (reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by hazardous waste number.]

These wastes and their corresponding hazardous waste numbers are:

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P203	1646-88-4	Aldicarb sulfone
P070	116-06-3	Aldicarb
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R, T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate (1-), bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H ₃ AsO ₄
P012	1327-53-3	Arsenic oxide As ₂ O ₃
P011	1303-28-2	Arsenic oxide As ₂ O ₅
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-,(R)-
P046	122-09-8	Benzeneethanamine, alpha, alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P188	<u>57-64-7</u>	<u>Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol -5-yl methylcarbamate ester (1:1)</u>
P001	<u>181-81-2</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%</u>
P028	<u>100-44-7</u>	<u>Benzyl chloride</u>
P015	<u>7440-41-7</u>	<u>Beryllium powder</u>
P017	<u>598-31-2</u>	<u>Bromoacetone</u>
P018	<u>357-57-3</u>	<u>Brucine</u>
P045	<u>39196-18-4</u>	<u>2-Butanone, 3,3-dimethyl-1-(methylthio)-.O-[(methylamino)carbonyl] oxime</u>
P021	<u>592-01-8</u>	<u>Calcium cyanide</u>
P021	<u>592-01-8</u>	<u>Calcium cyanide Ca(CN)₂</u>
P189	<u>55285-14-8</u>	<u>Carbamic acid, [(dibutylamino)- thio]methyl-,2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester</u>
P191	<u>644-64-4</u>	<u>Carbamic acid, dimethyl-,1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester</u>
P192	<u>119-38-0</u>	<u>Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester</u>
P190	<u>1129-41-5</u>	<u>Carbamic acid, methyl-, 3-methylphenyl ester</u>
P127	<u>1563-66-2</u>	<u>Carbofuran</u>
P022	<u>75-15-0</u>	<u>Carbon disulfide</u>
P095	<u>75-44-5</u>	<u>Carbonic dichloride</u>
P189	<u>55285-14-8</u>	<u>Carbosulfan</u>
P023	<u>107-20-0</u>	<u>Chloroacetaldehyde</u>
P024	<u>106-47-8</u>	<u>p-Chloroaniline</u>
P026	<u>5344-82-1</u>	<u>1-(o-Chlorophenyl)thiourea</u>
P027	<u>542-76-7</u>	<u>3-Chloropropionitrile</u>
P029	<u>544-92-3</u>	<u>Copper cyanide</u>
P029	<u>544-92-3</u>	<u>Copper cyanide Cu(CN)</u>
P202	<u>64-00-6</u>	<u>m-Cumenyl methylcarbamate</u>
P030	<u>.....</u>	<u>Cyanides (soluble cyanide salts), not otherwise specified</u>
P031	<u>460-19-5</u>	<u>Cyanogen</u>
P033	<u>506-77-4</u>	<u>Cyanogen chloride</u>
P033	<u>506-77-4</u>	<u>Cyanogen chloride (CN)Cl</u>
P034	<u>131-89-5</u>	<u>2-Cyclohexyl-4,6-dinitrophenol</u>
P016	<u>542-88-1</u>	<u>Dichloromethyl ether</u>
P036	<u>696-28-6</u>	<u>Dichlorophenylarsine</u>
P037	<u>60-57-1</u>	<u>Dieldrin</u>
P038	<u>692-42-2</u>	<u>Diethylarsine</u>
P041	<u>311-45-5</u>	<u>Diethyl-p-nitrophenyl phosphate</u>
P040	<u>297-97-2</u>	<u>O,O-Diethyl O-pyrazinyl phosphorothioate</u>
P043	<u>55-91-4</u>	<u>Diisopropylfluorophosphate (DFP)</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>P004</u>	<u>309-00-2</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)-</u>
<u>P060</u>	<u>465-73-6</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-</u>
<u>P037</u>	<u>60-57-1</u>	<u>2,7:3,6-Dimethanonaphth[2,3b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-</u>
<u>P051</u>	<u>172-20-8</u>	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites</u>
<u>P044</u>	<u>60-51-5</u>	<u>Dimethoate</u>
<u>P046</u>	<u>122-09-8</u>	<u>alpha, alpha-Dimethylphenthylamine</u>
<u>P191</u>	<u>644-64-4</u>	<u>Dimetilan</u>
<u>P047</u>	<u>1534-52-1</u>	<u>4,6-Dinitro-o-cresol and salts</u>
<u>P048</u>	<u>51-28-5</u>	<u>2,4-Dinitrophenol</u>
<u>P020</u>	<u>88-85-7</u>	<u>Dinoseb</u>
<u>P085</u>	<u>152-16-9</u>	<u>Diphosphoramidate, octamethyl-</u>
<u>P111</u>	<u>107-49-3</u>	<u>Diphosphoric acid, tetraethyl ester</u>
<u>P039</u>	<u>298-04-4</u>	<u>Disulfoton</u>
<u>P049</u>	<u>541-53-7</u>	<u>Dithiobiuret</u>
<u>P185</u>	<u>26419-73-8</u>	<u>1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime</u>
<u>P050</u>	<u>115-29-7</u>	<u>Endosulfan</u>
<u>P088</u>	<u>145-73-3</u>	<u>Endothall</u>
<u>P051</u>	<u>72-20-8</u>	<u>Endrin</u>
<u>P051</u>	<u>72-20-8</u>	<u>Endrin, & metabolites</u>
<u>P042</u>	<u>51-43-4</u>	<u>Epinephrine</u>
<u>P031</u>	<u>460-19-5</u>	<u>Ethanedinitrile</u>
<u>P066</u>	<u>16752-77-5</u>	<u>Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester</u>
<u>P194</u>	<u>23135-22-0</u>	<u>Ethanimidothioic acid, 2-(dimethylamino)-N-[[[(methylamino) carbonl]oxy]-2-oxo-, methyl ester</u>
<u>P101</u>	<u>107-12-0</u>	<u>Ethyl cyanide</u>
<u>P054</u>	<u>151-56-4</u>	<u>Ethyleneimine</u>
<u>P097</u>	<u>52-85-7</u>	<u>Famphur</u>
<u>P056</u>	<u>7782-41-4</u>	<u>Fluorine</u>
<u>P057</u>	<u>640-19-7</u>	<u>Fluoroacetamide</u>
<u>P058</u>	<u>62-74-8</u>	<u>Fluoroacetic acid, sodium salt</u>
<u>P198</u>	<u>23422-53-9</u>	<u>Formetanate hydrochloride</u>
<u>P197</u>	<u>17702-57-7</u>	<u>Formparanate</u>
<u>P065</u>	<u>628-86-4</u>	<u>Fulminic acid, mercury(2+)salt (R,T)</u>
<u>P059</u>	<u>76-44-8</u>	<u>Heptachlor</u>
<u>P062</u>	<u>757-58-4</u>	<u>Hexaethyl tetraphosphate</u>
<u>P116</u>	<u>79-19-6</u>	<u>Hydrazinecarbothioamide</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P068	<u>60-34-4</u>	<u>Hydrazine, methyl-</u>
P063	<u>74-90-8</u>	<u>Hydrocyanic acid</u>
P063	<u>74-90-8</u>	<u>Hydrogen cyanide</u>
P096	<u>7803-51-2</u>	<u>Hydrogen phosphide</u>
P060	<u>465-73-6</u>	<u>Isodrin</u>
P192	<u>119-38-0</u>	<u>Isolan</u>
P202	<u>64-00-6</u>	<u>3-Isopropylphenyl N-methylcarbamate</u>
P007	<u>2763-96-4</u>	<u>3(2H)-Isoxazolone, 5-(aminomethyl)-</u>
P196	<u>15339-36-3</u>	<u>Manganese, bis(dimethylcarbamodithioato-S,S')-</u>
P196	<u>15339-36-3</u>	<u>Manganese dimethyldithiocarbamate</u>
P092	<u>62-38-4</u>	<u>Mercury, (acetato-O)phenyl-</u>
P065	<u>628-86-4</u>	<u>Mercury fulminate (R,T)</u>
P082	<u>62-75-9</u>	<u>Methanamine, N-methyl-N-nitroso-</u>
P064	<u>624-83-9</u>	<u>Methane, isocyanato-</u>
P016	<u>542-88-1</u>	<u>Methane, oxybis[chloro-</u>
P112	<u>509-14-8</u>	<u>Methane, tetranitro- (R)</u>
P118	<u>75-70-7</u>	<u>Methanethiol, trichloro-</u>
P198	<u>23422-53-9</u>	<u>Methanimidamide, N,N-dimethyl-N'-[3-[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride</u>
P197	<u>17702-57-7</u>	<u>Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[(methylamino)carbonyl]oxy]phenyl]-</u>
P050	<u>115-29-7</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide</u>
P059	<u>76-44-8</u>	<u>4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-</u>
P199	<u>2032-65-7</u>	<u>Methiocarb</u>
P066	<u>16752-77-5</u>	<u>Methomyl</u>
P068	<u>60-34-4</u>	<u>Methyl hydrazine</u>
P064	<u>624-83-9</u>	<u>Methyl isocyanate</u>
P069	<u>75-86-5</u>	<u>2-Methylactonitrile</u>
P071	<u>298-00-0</u>	<u>Methyl parathion</u>
P190	<u>1129-41-5</u>	<u>Metolcarb</u>
P128	<u>315-18-4</u>	<u>Mexacarbamate</u>
P072	<u>86-88-4</u>	<u>alpha-Naphthylthiourea</u>
P073	<u>13463-39-3</u>	<u>Nickel carbonyl</u>
P073	<u>13463-39-3</u>	<u>Nickel carbonyl Ni(CO)₄, (T-4)-</u>
P074	<u>557-19-7</u>	<u>Nickel cyanide</u>
P074	<u>557-19-7</u>	<u>Nickel cyanide Ni(CN)₂</u>
P075	<u>154-11-5</u>	<u>Nicotine and salts</u>
P076	<u>10102-43-9</u>	<u>Nitric oxide</u>
P077	<u>100-01-6</u>	<u>p-Nitroaniline</u>
P078	<u>10102-44-0</u>	<u>Nitrogen dioxide</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P076	<u>10102-43-9</u>	<u>Nitrogen oxide NO</u>
P078	<u>10102-44-0</u>	<u>Nitrogen oxide NO₂</u>
P081	<u>55-63-0</u>	<u>Nitroglycerine (R)</u>
P082	<u>62-75-9</u>	<u>N-Nitrosodimethylamine</u>
P084	<u>4549-40-0</u>	<u>N-Nitrosomethylvinylamine</u>
P085	<u>152-16-9</u>	<u>Octamethylpyrophosphoramidate</u>
P087	<u>20816-12-0</u>	<u>Osmium oxide OsO₄(T-4)-</u>
P087	<u>20816-12-0</u>	<u>Osmium tetroxide</u>
P088	<u>145-73-3</u>	<u>7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid</u>
P194	<u>23135-22-0</u>	<u>Oxamyl</u>
P089	<u>56-38-2</u>	<u>Parathion</u>
P034	<u>131-89-5</u>	<u>Phenol, 2-cyclohexyl-4,6-dinitro-</u>
P128	<u>315-18-4</u>	<u>Phenol, 4-(dimethylamino)-3,5-dimethyl-,methylcarbamate(ester)</u>
P199	<u>2032-65-7</u>	<u>Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate</u>
P048	<u>51-28-5</u>	<u>Phenol, 2,4-dinitro-</u>
P047	<u>1534-52-1</u>	<u>Phenol, 2-methyl-4,6-dinitro-, and salts</u>
P202	<u>64-00-6</u>	<u>Phenol, 3-(1-methylethyl)-, methyl carbamate</u>
P201	<u>2631-37-0</u>	<u>Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate</u>
P020	<u>88-85-7</u>	<u>Phenol, 2-(1-methylpropyl)-4,6-dinitro-</u>
P009	<u>131-74-8</u>	<u>Phenol, 2,4,6-trinitro-, ammonium salt (R)</u>
P092	<u>62-38-4</u>	<u>Phenylmercury acetate</u>
P093	<u>103-85-5</u>	<u>Phenylthiourea</u>
P094	<u>298-02-2</u>	<u>Phorate</u>
P095	<u>75-44-5</u>	<u>Phosgene</u>
P096	<u>7803-51-2</u>	<u>Phosphine</u>
P041	<u>311-45-5</u>	<u>Phosphoric acid, diethyl 4-nitrophenyl ester</u>
P039	<u>298-04-4</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester</u>
P094	<u>298-02-2</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl]ester</u>
P044	<u>60-51-5</u>	<u>Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl]ester</u>
P043	<u>55-91-4</u>	<u>Phosphorofluoridic acid, bis(1-methylethyl) ester</u>
P089	<u>56-38-2</u>	<u>Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester</u>
P040	<u>297-97-2</u>	<u>Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester</u>
P097	<u>52-85-7</u>	<u>Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethylester</u>
P071	<u>298-00-0</u>	<u>Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester</u>
P204	<u>57-47-6</u>	<u>Physostigmine</u>
P188	<u>57-64-7</u>	<u>Physostigmine salicylate</u>
P110	<u>78-00-2</u>	<u>Plumbane, tetraethyl-</u>
P098	<u>151-50-8</u>	<u>Potassium cyanide</u>
P098	<u>151-50-8</u>	<u>Potassium cyanide K(CN)</u>
P099	<u>506-61-6</u>	<u>Potassium silver cyanide</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P201	<u>2631-37-0</u>	<u>Promecarb</u>
P070	<u>116-06-3</u>	<u>Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime</u>
P203	<u>1646-88-4</u>	<u>Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime</u>
P101	<u>107-12-0</u>	<u>Propanenitrile</u>
P027	<u>542-76-7</u>	<u>Propanenitrile, 3-chloro-</u>
P069	<u>75-86-5</u>	<u>Propanenitrile, 2-hydroxy-2methyl-</u>
P081	<u>55-63-0</u>	<u>1,2,3-Propanetriol, trinitrate (R)</u>
P017	<u>598-31-2</u>	<u>2-Propanone, 1-bromo-</u>
P102	<u>107-19-7</u>	<u>Propargyl alcohol</u>
P003	<u>107-02-8</u>	<u>2-Propenal</u>
P005	<u>107-18-6</u>	<u>2-Propen-1-ol</u>
P067	<u>75-55-8</u>	<u>1,2-Propylenimine</u>
P102	<u>107-19-7</u>	<u>2-Propyn-1-ol</u>
P008	<u>504-24-5</u>	<u>Pyridianamine</u>
P075	<u>154-11-5</u>	<u>Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S), & salts</u>
P204	<u>57-47-6</u>	<u>Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-methylcarbamate (ester), (3aS-cis)-</u>
P114	<u>12039-52-0</u>	<u>Selenious acid, dithallium(+1) salt</u>
P103	<u>630-10-4</u>	<u>Selenourea</u>
P104	<u>506-64-9</u>	<u>Silver cyanide</u>
P104	<u>506-64-9</u>	<u>Silver cyanide Ag(CN)</u>
P105	<u>26628-22-8</u>	<u>Sodium azide</u>
P106	<u>143-33-9</u>	<u>Sodium cyanide</u>
P106	<u>143-33-9</u>	<u>Sodium cyanide Na(CN)</u>
P108	<u>157-24-9</u>	<u>Strychnidin-10-one, and salts</u>
P018	<u>357-57-3</u>	<u>Strychnidin-10-one, 2,3-dimethoxy-</u>
P108	<u>157-24-9</u>	<u>Strychnine and salts</u>
P115	<u>7446-18-6</u>	<u>Sulfuric acid, dithallium(1+)salt</u>
P109	<u>3689-24-5</u>	<u>Tetraethyldithiopyrophosphate</u>
P110	<u>78-00-2</u>	<u>Tetraethyl lead</u>
P111	<u>107-49-3</u>	<u>Tetraethyl pyrophosphate</u>
P112	<u>509-14-8</u>	<u>Tetranitromethane (R)</u>
P062	<u>757-58-4</u>	<u>Tetraphosphoric acid, hexaethyl ester</u>
P113	<u>1314-32-5</u>	<u>Thallic oxide</u>
P113	<u>1314-32-5</u>	<u>Thallium oxide Tl₂O₃</u>
P114	<u>12039-52-0</u>	<u>Thallium(I) selenite</u>
P115	<u>7446-18-6</u>	<u>Thallium(I) sulfate</u>
P109	<u>3689-24-5</u>	<u>Thiodiphosphoric acid, tetraethyl ester</u>
P045	<u>39196-18-4</u>	<u>Thiofanox</u>
P049	<u>541-53-7</u>	<u>Thioimidodicarbonic diamide [(H₂N)C(S)]₂NH</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P014	<u>108-98-5</u>	<u>Thiophenol</u>
P116	<u>79-19-6</u>	<u>Thiosemicarbazide</u>
P026	<u>5344-82-1</u>	<u>Thiourea, (2-chlorophenyl)-</u>
P072	<u>86-88-4</u>	<u>Thiourea, 1-naphthalenyl-</u>
P093	<u>103-85-5</u>	<u>Thiourea, phenyl-</u>
P185	<u>26419-73-8</u>	<u>Tirpate</u>
P123	<u>80201-35-2</u>	<u>Toxaphene</u>
P118	<u>75-70-7</u>	<u>Trichloromethanethiol</u>
P119	<u>7803-55-6</u>	<u>Vanadic acid, ammonium salt</u>
P120	<u>1314-62-1</u>	<u>Vanadium oxide V₂O₅</u>
P120	<u>1314-62-1</u>	<u>Vanadium pentoxide</u>
P084	<u>4549-40-0</u>	<u>Vinylamine, N-methyl-N-nitroso-</u>
P001	<u>181-81-2</u>	<u>Warfarin, & salts, when present at concentrations greater than 0.3%</u>
P205	<u>137-30-4</u>	<u>Zinc, bis(dimethylcarbamodithioato-S,S')-</u>
P121	<u>557-21-1</u>	<u>Zinc cyanide</u>
P121	<u>557-21-1</u>	<u>Zinc cyanide Zn(CN)₂</u>
P122	<u>1314-84-7</u>	<u>Zinc phosphide Zn₃P₂, when present at concentrations greater than 10% (R,T)</u>
P205	<u>137-30-4</u>	<u>Ziram.</u>
P001	<u>181-81-2</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%</u>
P001	<u>181-81-2</u>	<u>Warfarin, & salts, when present at concentrations greater than 0.3%</u>
P002	<u>591-08-2</u>	<u>Acetamide, '(aminothioxomethyl)-</u>
P002	<u>591-08-2</u>	<u>1-Acetyl-2-thiourea</u>
P003	<u>107-02-8</u>	<u>Acrolein</u>
P003	<u>107-02-8</u>	<u>2-Propenal</u>
P004	<u>309-00-2</u>	<u>Aldrin</u>
P004	<u>309-00-2</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-</u>
P005	<u>107-18-6</u>	<u>Allyl alcohol</u>
P005	<u>107-18-6</u>	<u>2-Propen-1-ol</u>
P006	<u>20859-73-8</u>	<u>Aluminum phosphide (R,T)</u>
P007	<u>2763-96-4</u>	<u>5-(Aminomethyl)-3-isoxazolol</u>
P007	<u>2763-96-4</u>	<u>3(2H)-Isoxazolone,5-(aminomethyl)-</u>
P008	<u>504-24-5</u>	<u>4-Aminopyridine</u>
P008	<u>504-24-5</u>	<u>4-Pyridinamine</u>
P009	<u>131-74-8</u>	<u>Ammonium picrate (R)</u>
P009	<u>131-74-8</u>	<u>Phenol,2,4,6-trinitro-, ammonium salt (R)</u>
P010	<u>7778-39-4</u>	<u>Arsenic acid H₃AsO₄</u>
P011	<u>1303-28-2</u>	<u>Arsenic oxide As₂O₅</u>
P011	<u>1303-28-2</u>	<u>Arsenic pentoxide</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P012	<u>1327-53-3</u>	<u>Arsenic oxide As₂O₃</u>
P012	<u>1327-53-3</u>	<u>Arsenic trioxide</u>
P013	<u>542-62-1</u>	<u>Barium cyanide</u>
P014	<u>108-98-5</u>	<u>Benzenethiol</u>
P014	<u>108-98-5</u>	<u>Thiophenol</u>
P015	<u>7440-41-7</u>	<u>Beryllium powder</u>
P016	<u>542-88-1</u>	<u>Dichloromethyl ether</u>
P016	<u>542-88-1</u>	<u>Methane, oxybis(chloro-</u>
P017	<u>598-31-2</u>	<u>Bromoacetone</u>
P017	<u>598-31-2</u>	<u>2-Propanone, 1-bromo-</u>
P018	<u>357-57-3</u>	<u>Brucine</u>
P018	<u>357-57-3</u>	<u>Strychnidin-10-one, 2,3-dimethoxy-</u>
P020	<u>88-85-7</u>	<u>Dinoseb</u>
P020	<u>88-85-7</u>	<u>Phenol, 2-(1-methylpropyl)-4,6-dinitro-</u>
P021	<u>592-01-8</u>	<u>Calcium cyanide</u>
P021	<u>592-01-8</u>	<u>Calcium cyanide Ca(CN)₂</u>
P022	<u>75-15-0</u>	<u>Carbon disulfide</u>
P023	<u>107-20-0</u>	<u>Acetaldehyde, chloro-</u>
P023	<u>107-20-0</u>	<u>Chloroacetaldehyde</u>
P024	<u>106-47-8</u>	<u>Benzenamine, 4-chloro-</u>
P024	<u>106-47-8</u>	<u>p-Chloroaniline</u>
P026	<u>5344-82-1</u>	<u>1-(o-Chlorophenyl)thiourea</u>
P026	<u>5344-82-1</u>	<u>Thiourea, (2-chlorophenyl)</u>
P027	<u>542-76-7</u>	<u>3-Chloropropionitrile</u>
P027	<u>542-76-7</u>	<u>Propanenitrile, 3-chloro-</u>
P028	<u>100-44-7</u>	<u>Benzene, (chloromethyl)-</u>
P028	<u>100-44-7</u>	<u>Benzyl chloride</u>
P029	<u>544-92-3</u>	<u>Copper cyanide</u>
P029	<u>544-92-3</u>	<u>Copper cyanide Cu(CN)</u>
P030	<u>.....</u>	<u>Cyanides (soluble cyanide salts),not otherwise specified</u>
P031	<u>460-19-5</u>	<u>Cyanogen</u>
P031	<u>460-19-5</u>	<u>Ethanedinitrile</u>
P033	<u>506-77-4</u>	<u>Cyanogen chloride</u>
P033	<u>506-77-4</u>	<u>Cyanogen chloride(CN)Cl</u>
P034	<u>131-89-5</u>	<u>2-Cyclohexyl-4,6-dinitrophenol</u>
P034	<u>131-89-5</u>	<u>Phenol,2-cyclohexyl-4,6-dinitro-</u>
P036	<u>696-28-6</u>	<u>Arsonous dichloride, phenyl-</u>
P036	<u>696-28-6</u>	<u>Dichlorophenylarsine</u>
P037	<u>60-57-1</u>	<u>Dieldrin</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>P037</u>	<u>60-57-1</u>	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-</u>
<u>P038</u>	<u>692-42-2</u>	<u>Arsine, diethyl-</u>
<u>P038</u>	<u>692-42-2</u>	<u>Diethylarsine</u>
<u>P039</u>	<u>298-04-4</u>	<u>Disulfoton</u>
<u>P039</u>	<u>298-04-4</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester</u>
<u>P040</u>	<u>297-97-2</u>	<u>O,O-DiethylO-pyrazinyl phosphorothioate</u>
<u>P040</u>	<u>297-97-2</u>	<u>Phosphorothioic acid,O,O-diethyl O-pyrazinylester</u>
<u>P041</u>	<u>311-45-5</u>	<u>Diethyl-p-nitrophenyl phosphate</u>
<u>P041</u>	<u>311-45-5</u>	<u>Phosphoric acid, diethyl4- nitrophenyl ester</u>
<u>P042</u>	<u>51-43-4</u>	<u>1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-</u>
<u>P042</u>	<u>51-43-4</u>	<u>Epinephrine</u>
<u>P043</u>	<u>55-91-4</u>	<u>Diisopropylfluorophosphate (DFP)</u>
<u>P043</u>	<u>55-91-4</u>	<u>Phosphorofluoridic acid, bis(1-methylethyl) ester</u>
<u>P044</u>	<u>60-51-5</u>	<u>Dimethoate</u>
<u>P044</u>	<u>60-51-5</u>	<u>Phosphorodithioic acid,O,O- dimethyl S-[2-(methylamino) -2-oxoethyl] ester</u>
<u>P045</u>	<u>39196-18-4</u>	<u>2-Butanone, 3,3-dimethyl-1- (methylthio)-, O-[(methylamino)carbonyl] oxime</u>
<u>P045</u>	<u>39196-18-4</u>	<u>Thiofanox</u>
<u>P046</u>	<u>122-09-8</u>	<u>Benzeneethanamine, alpha,alpha-dimethyl-</u>
<u>P046</u>	<u>122-09-8</u>	<u>alpha,alpha- Dimethylphenethylamine</u>
<u>P047</u>	<u>1534-52-1</u>	<u>4,6-Dinitro-o-cresol, & salts</u>
<u>P047</u>	<u>1534-52-1</u>	<u>Phenol, 2-methyl-4,6-dinitro-, & salts</u>
<u>P048</u>	<u>51-28-5</u>	<u>2,4-Dinitrophenol</u>
<u>P048</u>	<u>51-28-5</u>	<u>Phenol,2,4-dinitro-</u>
<u>P049</u>	<u>541-53-7</u>	<u>Dithiobiuret</u>
<u>P049</u>	<u>541-53-7</u>	<u>Thioimidodicarbonic diamide [(H₂N)C(S)]₂NH</u>
<u>P050</u>	<u>115-29-7</u>	<u>Endosulfan</u>
<u>P050</u>	<u>115-29-7</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide</u>
<u>P051</u>	<u>172-20-08</u>	<u>2,7:3,6-Dimethanonaphth [2,3-b]oxirene ,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites</u>
<u>P051</u>	<u>72-20-8</u>	<u>Endrin</u>
<u>P051</u>	<u>72-20-8</u>	<u>Endrin, & metabolites</u>
<u>P054</u>	<u>151-56-4</u>	<u>Aziridine</u>
<u>P054</u>	<u>151-56-4</u>	<u>Ethyleneimine</u>
<u>P056</u>	<u>7782-41-4</u>	<u>Fluorine</u>
<u>P057</u>	<u>640-19-7</u>	<u>Acetamide, 2-fluoro-</u>
<u>P057</u>	<u>640-19-7</u>	<u>Fluoroacetamide</u>
<u>P058</u>	<u>62-74-8</u>	<u>Acetic acid, fluoro-, sodium salt</u>
<u>P058</u>	<u>62-74-8</u>	<u>Fluoroacetic acid, sodium salt</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>P059</u>	<u>76-44-8</u>	<u>Heptachlor</u>
<u>P059</u>	<u>76-44-8</u>	<u>4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-</u>
<u>P060</u>	<u>465-73-6</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-</u>
<u>P060</u>	<u>465-73-6</u>	<u>Isodrin</u>
<u>P062</u>	<u>757-58-4</u>	<u>Hexaethyl tetraphosphate</u>
<u>P062</u>	<u>757-58-4</u>	<u>Tetraphosphoric acid, hexaethyl ester</u>
<u>P063</u>	<u>74-90-8</u>	<u>Hydrocyanic acid</u>
<u>P063</u>	<u>74-90-8</u>	<u>Hydrogen cyanide</u>
<u>P064</u>	<u>624-83-9</u>	<u>Methane, isocyanato-</u>
<u>P064</u>	<u>624-83-9</u>	<u>Methyl isocyanate</u>
<u>P065</u>	<u>628-86-4</u>	<u>Fulminic acid, mercury(2+) salt (R,T)</u>
<u>P065</u>	<u>628-86-4</u>	<u>Mercury fulminate (R,T)</u>
<u>P066</u>	<u>16752-77-5</u>	<u>Ethanimidothioic acid ,[(methylamino)carbonyl]oxy]-, methyl ester</u>
<u>P066</u>	<u>16752-77-5</u>	<u>Methomyl</u>
<u>P067</u>	<u>75-55-8</u>	<u>Aziridine, 2-methyl-</u>
<u>P067</u>	<u>75-55-8</u>	<u>1,2-Propylenimine</u>
<u>P068</u>	<u>60-34-4</u>	<u>Hydrazine, methyl-</u>
<u>P068</u>	<u>60-34-4</u>	<u>Methyl hydrazine</u>
<u>P069</u>	<u>75-86-5</u>	<u>2-Methylactonitrile</u>
<u>P069</u>	<u>75-86-5</u>	<u>Propanenitrile, 2-hydroxy-2-methyl-</u>
<u>P070</u>	<u>116-06-3</u>	<u>Aldicarb</u>
<u>P070</u>	<u>116-06-3</u>	<u>Propanal, 2-methyl-2- (methylthio)-, O-[(methylamino)carbonyl]oxime</u>
<u>P071</u>	<u>298-00-0</u>	<u>Methyl parathion</u>
<u>P071</u>	<u>298-00-0</u>	<u>Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester</u>
<u>P072</u>	<u>86-88-4</u>	<u>alpha-Naphthylthiourea</u>
<u>P072</u>	<u>86-88-4</u>	<u>Thiourea, 1-naphthalenyl-</u>
<u>P073</u>	<u>13463-39-3</u>	<u>Nickel carbonyl</u>
<u>P073</u>	<u>13463-39-3</u>	<u>Nickel carbonyl Ni(CO)₄,(T-4)-</u>
<u>P074</u>	<u>557-19-7</u>	<u>Nickel cyanide</u>
<u>P074</u>	<u>557-19-7</u>	<u>Nickel cyanide Ni(CN)₂</u>
<u>P075</u>	<u>154-11-5</u>	<u>Nicotine, & salts</u>
<u>P075</u>	<u>154-11-5</u>	<u>Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-, & salts</u>
<u>P076</u>	<u>10102-43-9</u>	<u>Nitric oxide</u>
<u>P076</u>	<u>10102-43-9</u>	<u>Nitrogen oxide NO</u>
<u>P077</u>	<u>100-01-6</u>	<u>Benzenamine, 4-nitro-</u>
<u>P077</u>	<u>100-01-6</u>	<u>p-Nitroaniline</u>
<u>P078</u>	<u>10102-44-0</u>	<u>Nitrogen dioxide</u>
<u>P078</u>	<u>10102-44-0</u>	<u>Nitrogen oxide NO₂</u>
<u>P081</u>	<u>55-63-0</u>	<u>Nitroglycerine (R)</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P081	<u>55-63-0</u>	<u>1,2,3-Propanetriol, trinitrate (R)</u>
P082	<u>62-75-9</u>	<u>Methanamine, -methyl-N- nitroso-</u>
P082	<u>62-75-9</u>	<u>N-Nitrosodimethylamine</u>
P084	<u>4549-40-0</u>	<u>N-Nitrosomethylvinylamine</u>
P084	<u>4549-40-0</u>	<u>Vinylamine, -methyl-N-nitroso-</u>
P085	<u>152-16-9</u>	<u>Diphosphoramidate, octamethyl-</u>
P085	<u>152-16-9</u>	<u>Octamethylpyrophosphoramidate</u>
P087	<u>20816-12-0</u>	<u>Osmium oxide OsO₄(T-4)-</u>
P087	<u>20816-12-0</u>	<u>Osmium tetroxide</u>
P088	<u>145-73-3</u>	<u>Endothall</u>
P088	<u>145-73-3</u>	<u>7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid</u>
P089	<u>56-38-2</u>	<u>Parathion</u>
P089	<u>56-38-2</u>	<u>Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester</u>
P092	<u>62-38-4</u>	<u>Mercury, (acetato-O)phenyl-</u>
P092	<u>62-38-4</u>	<u>Phenylmercury acetate</u>
P093	<u>103-85-5</u>	<u>Phenylthiourea</u>
P093	<u>103-85-5</u>	<u>Thiourea, phenyl-</u>
P094	<u>298-02-2</u>	<u>Phorate</u>
P094	<u>298-02-2</u>	<u>Phosphorodithioic acid, O,O- diethylS-[(ethylthio)methyl] ester</u>
P095	<u>75-44-5</u>	<u>Carbonic dichloride</u>
P095	<u>75-44-5</u>	<u>Phosgene</u>
P096	<u>7803-51-2</u>	<u>Hydrogen phosphide</u>
P096	<u>7803-51-2</u>	<u>Phosphine</u>
P097	<u>52-85-7</u>	<u>Famphur</u>
P097	<u>52-85-7</u>	<u>Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester</u>
P098	<u>151-50-8</u>	<u>Potassium cyanide</u>
P098	<u>151-50-8</u>	<u>Potassium cyanide K(CN)</u>
P099	<u>506-61-6</u>	<u>Argentate(1-), bis(cyano-C)-, potassium</u>
P099	<u>506-61-6</u>	<u>Potassium silver cyanide</u>
P101	<u>107-12-0</u>	<u>Ethyl cyanide</u>
P101	<u>107-12-0</u>	<u>Propanenitrile</u>
P102	<u>107-19-7</u>	<u>Propargyl alcohol</u>
P102	<u>107-19-7</u>	<u>2-Propyn-1-ol</u>
P103	<u>630-10-4</u>	<u>Selenourea</u>
P104	<u>506-64-9</u>	<u>Silver cyanide</u>
P104	<u>506-64-9</u>	<u>Silver cyanide Ag(CN)</u>
P105	<u>26628-22-8</u>	<u>Sodium azide</u>
P106	<u>143-33-9</u>	<u>Sodium cyanide</u>
P106	<u>143-33-9</u>	<u>Sodium cyanide Na(CN)</u>
P108	<u>1157-24-9</u>	<u>Strychnidin-10-one, & salts</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P108	<u>1157-24-9</u>	<u>Strychnine, & salts</u>
P109	<u>3689-24-5</u>	<u>Tetraethyldithiopyrophosphate</u>
P109	<u>3689-24-5</u>	<u>Thiodiphosphoric acid, tetraethyl ester</u>
P110	<u>78-00-2</u>	<u>Plumbane, tetraethyl-</u>
P110	<u>78-00-2</u>	<u>Tetraethyl lead</u>
P111	<u>107-49-3</u>	<u>Diphosphoric acid, tetraethyl ester</u>
P111	<u>107-49-3</u>	<u>Tetraethyl pyrophosphate</u>
P112	<u>509-14-8</u>	<u>Methane, tetranitro-(R)</u>
P112	<u>509-14-8</u>	<u>Tetranitromethane (R)</u>
P113	<u>1314-32-5</u>	<u>Thallic oxide</u>
P113	<u>1314-32-5</u>	<u>Thallium oxide Tl_2O_3</u>
P114	<u>12039-52-0</u>	<u>Selenious acid, dithallium(1+) salt</u>
P114	<u>12039-52-0</u>	<u>Tetraethyldithiopyrophosphate</u>
P115	<u>7446-18-6</u>	<u>Thiodiphosphoric acid, tetraethyl ester</u>
P115	<u>7446-18-6</u>	<u>Plumbane, tetraethyl-</u>
P116	<u>79-19-6</u>	<u>Tetraethyl lead</u>
P116	<u>79-19-6</u>	<u>Thiosemicarbazide</u>
P118	<u>75-70-7</u>	<u>Methanethiol, trichloro-</u>
P118	<u>75-70-7</u>	<u>Trichloromethanethiol</u>
P119	<u>7803-55-6</u>	<u>Ammonium vanadate</u>
P119	<u>7803-55-6</u>	<u>Vanadic acid, ammonium salt</u>
P120	<u>1314-62-1</u>	<u>Vanadium oxide V_2O_5</u>
P120	<u>1314-62-1</u>	<u>Vanadium pentoxide</u>
P121	<u>557-21-1</u>	<u>Zinc cyanide</u>
P121	<u>557-21-1</u>	<u>Zinc cyanide $Zn(CN)_2$</u>
P122	<u>1314-84-7</u>	<u>Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)</u>
P123	<u>8001-35-2</u>	<u>Toxaphene</u>
P127	<u>1563-66-2</u>	<u>7-Benzofuranol, 2,3-dihydro-2, 2-dimethyl-, methylcarbamate.</u>
P127	<u>1563-66-2</u>	<u>Carbofuran</u>
P128	<u>315-8-4</u>	<u>Mexacarbate</u>
P128	<u>315-18-4</u>	<u>Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)</u>
P185	<u>26419-73-8</u>	<u>1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime</u>
P185	<u>26419-73-8</u>	<u>Tirpate</u>
P188	<u>57-64-7</u>	<u>Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1)</u>
P188	<u>57-64-7</u>	<u>Physostigmine salicylate</u>
P189	<u>55285-14-8</u>	<u>Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester</u>
P189	<u>55285-14-8</u>	<u>Carbosulfan</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
P190	<u>1129-41-5</u>	<u>Carbamic acid, methyl-,3- methylphenyl ester</u>
P190	<u>1129-41-5</u>	<u>Metolcarb</u>
P191	<u>644-64-4</u>	<u>Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester</u>
P191	<u>644-64-4</u>	<u>Dimetilan</u>
P192	<u>119-38-0</u>	<u>Carbamic acid, dimethyl-,3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester</u>
P192	<u>119-38-0</u>	<u>Isolan</u>
P194	<u>23135-22-0</u>	<u>Ethanimidthioic acid, 2-(dimethylamino)-N-[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester</u>
P194	<u>23135-22-0</u>	<u>Oxamyl</u>
P196	<u>15339-36-3</u>	<u>Manganese, bis(dimethylcarbomodithioato-S,S')-</u>
P196	<u>15339-36-3</u>	<u>Manganese dimethyldithiocarbamate</u>
P197	<u>17702-57-7</u>	<u>Formparanate</u>
P197	<u>17702-57-7</u>	<u>Methanimidamide, N,N-dimethyl-N'-[2-methyl-4- [(methylamino)carbonyl]oxy] phenyl]-</u>
P198	<u>23422-53-9</u>	<u>Formetanate hydrochloride</u>
P198	<u>23422-53-9</u>	<u>Methanimidamide, N,N-dimethyl-N'-[3-[(methylamino)- carbonyl]oxy]phenyl]-monohydrochloride</u>
P199	<u>2032-65-7</u>	<u>Methiocarb</u>
P199	<u>2032-65-7</u>	<u>Phenol, (3,5-dimethyl-4-(methylthio)-,methylcarbamate</u>
P201	<u>2631-37-0</u>	<u>Phenol, 3-methyl-5-(1-methylethyl)-,methylcarbamate</u>
P201	<u>2631-37-0</u>	<u>Promecarb</u>
P202	<u>64-00-6</u>	<u>m-Cumenyl methylcarbamate</u>
P202	<u>64-00-6</u>	<u>3-Isopropylphenyl ' methylcarbamate</u>
P202	<u>64-00-6</u>	<u>Phenol, 3-(1-methylethyl)-, methyl carbamate</u>
P203	<u>1646-88-4</u>	<u>Aldicarb sulfone</u>
P203	<u>1646-88-4</u>	<u>Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime</u>
P204	<u>57-47-6</u>	<u>Physostigmine</u>
P204	<u>57-47-6</u>	<u>Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate(ester), (3aS-cis)-</u>
P205	<u>137-30-4</u>	<u>Zinc, bis(dimethylcarbomodithioato-S,S')-</u>
P205	<u>137-30-4</u>	<u>Ziram</u>

¹CAS number given for parent compound only.

6. The commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products, or mixtures of the chemicals referred to in subsections 1 through 4, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in subsections 1 and 7 of section 33.1-24-02-05.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (toxicity), R (reactivity), I (ignitability), and C (corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by hazardous waste number.]

These wastes and their corresponding hazardous waste numbers are:

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U394</u>	<u>30558-43-1</u>	<u>A2213</u>
<u>U001</u>	<u>75-07-0</u>	<u>Acetaldehyde (l)</u>
<u>U034</u>	<u>75-87-6</u>	<u>Acetaldehyde, trichloro-</u>
<u>U187</u>	<u>62-44-2</u>	<u>Acetamide, N-(4-ethoxyphenyl)-</u>
<u>U005</u>	<u>53-96-3</u>	<u>Acetamide, N-9H-fluoren-2-yl</u>
<u>U240</u>	<u>194-75-7</u>	<u>Acetic acid, (2,4-dichlorophenoxy)-, salts & esters</u>
<u>U112</u>	<u>141-78-6</u>	<u>Acetic acid, ethyl ester (l)</u>
<u>U144</u>	<u>301-04-2</u>	<u>Acetic acid, lead(2+) salt</u>
<u>U214</u>	<u>563-68-8</u>	<u>Acetic acid, thallium (1+) salt</u>
<u>See F027</u>	<u>93-76-5</u>	<u>Acetic acid, (2,4,5-trichlorophenoxy)-</u>
<u>U002</u>	<u>67-64-1</u>	<u>Acetone (l)</u>
<u>U003</u>	<u>75-05-8</u>	<u>Acetonitrile (l,T)</u>
<u>U004</u>	<u>98-86-2</u>	<u>Acetophenone</u>
<u>U005</u>	<u>53-96-3</u>	<u>2-Acetylaminofluorene</u>
<u>U006</u>	<u>75-36-5</u>	<u>Acetyl chloride (C,R,T)</u>
<u>U007</u>	<u>79-06-1</u>	<u>Acrylamide</u>
<u>U008</u>	<u>79-10-7</u>	<u>Acrylic acid (l)</u>
<u>U009</u>	<u>107-13-1</u>	<u>Acrylonitrile</u>
<u>U011</u>	<u>61-82-5</u>	<u>Amitrole</u>
<u>U012</u>	<u>62-53-3</u>	<u>Aniline (l,T)</u>
<u>U136</u>	<u>75-60-5</u>	<u>Arsinic acid, dimethyl-</u>
<u>U014</u>	<u>492-80-8</u>	<u>Auramine</u>
<u>U015</u>	<u>115-02-6</u>	<u>Azaserine</u>
<u>U010</u>	<u>50-07-7</u>	<u>Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[aminocarbonyloxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-[1aS-(1aalpha, 8beta, 8aalpha, 8balph)]-</u>
<u>U280</u>	<u>101-27-9</u>	<u>Barban</u>
<u>U278</u>	<u>22781-23-3</u>	<u>Bendiocarb</u>
<u>U364</u>	<u>22961-82-6</u>	<u>Bendiocarb phenol</u>
<u>U271</u>	<u>17804-35-2</u>	<u>Benomyl</u>
<u>U157</u>	<u>56-49-5</u>	<u>Benz[j][aceanthrylene, 1,2-dihydro-3-methyl-</u>
<u>U016</u>	<u>225-51-4</u>	<u>Benz[c]acridine</u>
<u>U017</u>	<u>98-87-3</u>	<u>Benzal chloride</u>
<u>U192</u>	<u>23950-58-5</u>	<u>Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-</u>
<u>U018</u>	<u>56-55-3</u>	<u>Benz[a]anthracene</u>
<u>U094</u>	<u>57-97-6</u>	<u>Benz[a]anthracene, 7,12-dimethyl-</u>
<u>U012</u>	<u>62-53-3</u>	<u>Benzenamine (l,T)</u>
<u>U014</u>	<u>492-80-8</u>	<u>Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-</u>
<u>U049</u>	<u>3165-93-3</u>	<u>Benzenamine, 4-chloro-2-methyl-, hydrochloride</u>
<u>U093</u>	<u>60-11-7</u>	<u>Benzenamine, N,N-dimethyl-4-(phenylazo)-</u>
<u>U328</u>	<u>95-53-4</u>	<u>Benzenamine, 2-methyl-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U353</u>	<u>106-49-0</u>	<u>Benzenamine, 4-methyl-</u>
<u>U158</u>	<u>101-14-4</u>	<u>Benzenamine, 4,4'-methylenebis[2-chloro-</u>
<u>U222</u>	<u>636-21-5</u>	<u>Benzenamine, 2-methyl-, hydrochloride</u>
<u>U181</u>	<u>99-55-8</u>	<u>Benzenamine, 2-methyl-5-nitro-</u>
<u>U019</u>	<u>71-43-2</u>	<u>Benzene (l,T)</u>
<u>U038</u>	<u>510-15-6</u>	<u>Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-.ethyl ester</u>
<u>U030</u>	<u>101-55-3</u>	<u>Benzene, 1-bromo-4-phenoxy-</u>
<u>U035</u>	<u>305-03-3</u>	<u>Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-</u>
<u>U037</u>	<u>108-90-7</u>	<u>Benzene, chloro-</u>
<u>U221</u>	<u>25376-45-8</u>	<u>Benzenediamine, ar-methyl-</u>
<u>U028</u>	<u>117-81-7</u>	<u>1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester</u>
<u>U069</u>	<u>84-74-2</u>	<u>1,2-Benzenedicarboxylic acid, dibutyl ester</u>
<u>U088</u>	<u>84-66-2</u>	<u>1,2-Benzenedicarboxylic acid, diethyl ester</u>
<u>U102</u>	<u>131-11-3</u>	<u>1,2-Benzenedicarboxylic acid, dimethyl ester</u>
<u>U107</u>	<u>117-84-0</u>	<u>1,2-Benzenedicarboxylic acid, dioctyl ester</u>
<u>U070</u>	<u>95-50-1</u>	<u>Benzene, 1,2-dichloro-</u>
<u>U071</u>	<u>541-73-1</u>	<u>Benzene, 1,3-dichloro-</u>
<u>U072</u>	<u>106-46-7</u>	<u>Benzene, 1,4-dichloro-</u>
<u>U060</u>	<u>72-54-8</u>	<u>Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-</u>
<u>U017</u>	<u>98-87-3</u>	<u>Benzene, (dichloromethyl)-</u>
<u>U223</u>	<u>26471-62-5</u>	<u>Benzene, 1,3-diisocyanatomethyl- (R,T)</u>
<u>U239</u>	<u>1330-20-7</u>	<u>Benzene, dimethyl- (l)</u>
<u>U201</u>	<u>108-46-3</u>	<u>1,3-Benzenediol</u>
<u>U127</u>	<u>118-74-1</u>	<u>Benzene, hexachloro-</u>
<u>U056</u>	<u>110-82-7</u>	<u>Benzene, hexahydro- (l)</u>
<u>U220</u>	<u>108-88-3</u>	<u>Benzene, methyl-</u>
<u>U105</u>	<u>121-14-2</u>	<u>Benzene, 1-methyl-2,4-dinitro-</u>
<u>U106</u>	<u>606-20-2</u>	<u>Benzene, 2-methyl-1,3-dinitro-</u>
<u>U055</u>	<u>98-82-8</u>	<u>Benzene, (1-methylethyl)-(l)</u>
<u>U169</u>	<u>98-95-3</u>	<u>Benzene, nitro-</u>
<u>U183</u>	<u>608-93-5</u>	<u>Benzene, pentachloro-</u>
<u>U185</u>	<u>82-68-8</u>	<u>Benzene, pentachloronitro-</u>
<u>U020</u>	<u>98-09-9</u>	<u>Benzenesulfonic acid chloride (C,R)</u>
<u>U020</u>	<u>98-09-9</u>	<u>Benzenesulfonyl chloride (C,R)</u>
<u>U207</u>	<u>95-94-3</u>	<u>Benzene, 1,2,4,5-tetrachloro-</u>
<u>U061</u>	<u>50-29-3</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-</u>
<u>U247</u>	<u>72-43-5</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-</u>
<u>U023</u>	<u>98-07-7</u>	<u>Benzene, (trichloromethyl)-</u>
<u>U234</u>	<u>99-35-4</u>	<u>Benzene, 1,3,5-trinitro-</u>
<u>U021</u>	<u>92-87-5</u>	<u>Benzidine</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U278</u>	<u>22781-23-3</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate.</u>
<u>U364</u>	<u>22961-82-6</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-,</u>
<u>U203</u>	<u>94-59-7</u>	<u>1,3-Benzodioxole, 5-(2-propenyl)-</u>
<u>U141</u>	<u>120-58-1</u>	<u>1,3-Benzodioxole, 5-(1-propenyl)-</u>
<u>U090</u>	<u>94-58-6</u>	<u>1,3-Benzodioxole, 5-propyl-</u>
<u>U367</u>	<u>1563-38-8</u>	<u>7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-</u>
<u>U064</u>	<u>189-55-9</u>	<u>Benzo[rs]pentaphene</u>
<u>U248</u>	<u>181-81-2</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less</u>
<u>U022</u>	<u>50-32-8</u>	<u>Benzo[a]pyrene</u>
<u>U197</u>	<u>106-51-4</u>	<u>p-Benzoquinone</u>
<u>U023</u>	<u>98-07-7</u>	<u>Benzotrichloride (C,R,T)</u>
<u>U085</u>	<u>1464-53-5</u>	<u>2,2'-Bioxirane</u>
<u>U021</u>	<u>92-87-5</u>	<u>[1,1'-Biphenyl]-4,4'-diamine</u>
<u>U073</u>	<u>91-94-1</u>	<u>[1,1'Biphenyl]-4,4'-diamine, 3,3'-dichloro-</u>
<u>U091</u>	<u>119-90-4</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-</u>
<u>U095</u>	<u>119-93-7</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-</u>
<u>U225</u>	<u>75-25-2</u>	<u>Bromoform</u>
<u>U030</u>	<u>101-55-3</u>	<u>4-Bromophenyl phenyl ether</u>
<u>U128</u>	<u>87-68-3</u>	<u>1,3-Butadiene, 1,1,2,3,4,4-hexachloro-</u>
<u>U172</u>	<u>924-16-3</u>	<u>1-Butanamine, N-butyl-N-nitroso-</u>
<u>U031</u>	<u>71-36-3</u>	<u>1-Butanol (l)</u>
<u>U159</u>	<u>78-93-3</u>	<u>2-Butanone (l,T)</u>
<u>U160</u>	<u>1338-23-4</u>	<u>2-Butanone peroxide (R,T)</u>
<u>U053</u>	<u>4170-30-3</u>	<u>2-Butenal</u>
<u>U074</u>	<u>764-41-0</u>	<u>2-Butene, 1,4-dichloro- (l,T)</u>
<u>U143</u>	<u>303-34-4</u>	<u>2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester,[1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-</u>
<u>U031</u>	<u>71-36-3</u>	<u>n-Butyl alcohol (l)</u>
<u>U136</u>	<u>75-60-5</u>	<u>Cacodylic acid</u>
<u>U032</u>	<u>13765-19-0</u>	<u>Calcium chromate</u>
<u>U372</u>	<u>10605-21-7</u>	<u>Carbamic acid, 1H-benzimidazol-2-yl, methyl ester</u>
<u>U271</u>	<u>17804-35-2</u>	<u>Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-,methyl ester</u>
<u>U280</u>	<u>101-27-9</u>	<u>Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester</u>
<u>U238</u>	<u>51-79-6</u>	<u>Carbamic acid, ethyl ester</u>
<u>U178</u>	<u>615-53-2</u>	<u>Carbamic acid, methylnitroso-, ethyl ester</u>
<u>U373</u>	<u>122-42-9</u>	<u>Carbamic acid, phenyl-, 1-methylethyl ester.</u>
<u>U409</u>	<u>23564-05-8</u>	<u>Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-dimethyl ester</u>
<u>U097</u>	<u>79-44-7</u>	<u>Carbamic chloride, dimethyl-</u>
<u>U114</u>	<u>111-54-6</u>	<u>Carbamodithioic acid, 1,2-ethanediybis-, salts and esters</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U062</u>	<u>2303-16-4</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester</u>
<u>U389</u>	<u>2303-17-5</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester</u>
<u>U387</u>	<u>52888-80-9</u>	<u>Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester</u>
<u>U279</u>	<u>63-25-2</u>	<u>Carbaryl</u>
<u>U372</u>	<u>10605-21-7</u>	<u>Carbendazim</u>
<u>U367</u>	<u>1563-38-8</u>	<u>Carbofuran phenol</u>
<u>U215</u>	<u>6533-73-9</u>	<u>Carbonic acid, dithallium(1+) salt</u>
<u>U033</u>	<u>353-50-4</u>	<u>Carbon difluoride</u>
<u>U156</u>	<u>79-22-1</u>	<u>Carbonochloridic acid, methyl ester (I,T)</u>
<u>U033</u>	<u>353-50-4</u>	<u>Carbon oxyfluoride (R,T)</u>
<u>U211</u>	<u>56-23-5</u>	<u>Carbon tetrachloride</u>
<u>U034</u>	<u>75-87-6</u>	<u>Chloral</u>
<u>U035</u>	<u>305-03-3</u>	<u>Chlorambucil</u>
<u>U036</u>	<u>57-74-9</u>	<u>Chlordane, alpha & gamma isomers</u>
<u>U026</u>	<u>494-03-1</u>	<u>Chlornaphazine</u>
<u>U037</u>	<u>108-90-7</u>	<u>Chlorobenzene</u>
<u>U038</u>	<u>510-15-6</u>	<u>Chlorobenzilate</u>
<u>U039</u>	<u>59-50-7</u>	<u>4-Chloro-m-cresol</u>
<u>U042</u>	<u>110-75-8</u>	<u>2-Chloroethyl vinyl ether</u>
<u>U044</u>	<u>67-66-3</u>	<u>Chloroform</u>
<u>U046</u>	<u>107-30-2</u>	<u>Chloromethyl methyl ether</u>
<u>U047</u>	<u>91-58-7</u>	<u>beta-Chloronaphthalene</u>
<u>U048</u>	<u>95-57-8</u>	<u>o-Chlorophenol</u>
<u>U049</u>	<u>3165-93-3</u>	<u>4-Chloro-o-toluidine, hydrochloride</u>
<u>U032</u>	<u>13765-19-0</u>	<u>Chromic acid H₂CrO₄, calcium salt</u>
<u>U050</u>	<u>218-01-9</u>	<u>Chrysene</u>
<u>U051</u>	<u>.....</u>	<u>Creosote</u>
<u>U052</u>	<u>1319-77-3</u>	<u>Cresol (Cresylic acid)</u>
<u>U053</u>	<u>4170-30-3</u>	<u>Crotonaldehyde</u>
<u>U055</u>	<u>98-82-8</u>	<u>Cumene (I)</u>
<u>U246</u>	<u>506-68-3</u>	<u>Cyanogen bromide (CN)Br</u>
<u>U197</u>	<u>106-51-4</u>	<u>2,5-Cyclohexadiene-1,4-dione</u>
<u>U056</u>	<u>110-82-7</u>	<u>Cyclohexane (I)</u>
<u>U129</u>	<u>58-89-9</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro- (1alpha,2alpha,3beta,4alpha,5alpha,6beta)</u>
<u>U057</u>	<u>108-94-1</u>	<u>Cyclohexanone (I)</u>
<u>U130</u>	<u>77-47-4</u>	<u>1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-</u>
<u>U058</u>	<u>50-18-0</u>	<u>Cyclophosphamide</u>
<u>U240</u>	<u>194-75-7</u>	<u>2,4-D, salts and esters</u>
<u>U059</u>	<u>20830-81-3</u>	<u>Daunomycin</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U060</u>	<u>72-54-8</u>	<u>DDD</u>
<u>U061</u>	<u>50-29-3</u>	<u>DDT</u>
<u>U062</u>	<u>2303-16-4</u>	<u>Diallate</u>
<u>U063</u>	<u>53-70-3</u>	<u>Dibenz[a,h]anthracene</u>
<u>U064</u>	<u>189-55-9</u>	<u>Dibenzo[a,i]pyrene</u>
<u>U066</u>	<u>96-12-8</u>	<u>1,2-Dibromo-3-chloropropane</u>
<u>U069</u>	<u>84-74-2</u>	<u>Dibutyl phthalate</u>
<u>U070</u>	<u>95-50-1</u>	<u>o-Dichlorobenzene</u>
<u>U071</u>	<u>541-73-1</u>	<u>m-Dichlorobenzene</u>
<u>U072</u>	<u>106-46-7</u>	<u>p-Dichlorobenzene</u>
<u>U073</u>	<u>91-94-1</u>	<u>3,3'-Dichlorobenzidine</u>
<u>U074</u>	<u>764-41-0</u>	<u>1,4-Dichloro-2-butene (I,T)</u>
<u>U075</u>	<u>75-71-8</u>	<u>Dichlorodifluoromethane</u>
<u>U078</u>	<u>75-35-4</u>	<u>1,1-Dichloroethylene</u>
<u>U079</u>	<u>156-60-5</u>	<u>1,2-Dichloroethylene</u>
<u>U025</u>	<u>111-44-4</u>	<u>Dichloroethyl ether</u>
<u>U027</u>	<u>108-60-1</u>	<u>Dichloroisopropyl ether</u>
<u>U024</u>	<u>111-91-1</u>	<u>Dichloromethoxy ethane</u>
<u>U081</u>	<u>120-83-2</u>	<u>2,4-Dichlorophenol</u>
<u>U082</u>	<u>87-65-0</u>	<u>2,6-Dichlorophenol</u>
<u>U084</u>	<u>542-75-6</u>	<u>1,3-Dichloropropene</u>
<u>U085</u>	<u>1464-53-5</u>	<u>1,2:3,4-Diepoxybutane (I,T)</u>
<u>U395</u>	<u>5952-26-1</u>	<u>Diethylene glycol, dicarbamate</u>
<u>U108</u>	<u>123-91-1</u>	<u>1,4-Diethyleneoxide</u>
<u>U028</u>	<u>117-81-7</u>	<u>Diethylhexyl phthalate</u>
<u>U086</u>	<u>1615-80-1</u>	<u>N,N'-Diethylhydrazine</u>
<u>U087</u>	<u>3288-58-2</u>	<u>O,O-DiethylS-methyl-dithiophosphate</u>
<u>U088</u>	<u>84-66-2</u>	<u>Diethyl phthalate</u>
<u>U089</u>	<u>56-53-1</u>	<u>Diethylstilbesterol</u>
<u>U090</u>	<u>94-58-6</u>	<u>Dihydrosafrole</u>
<u>U091</u>	<u>119-90-4</u>	<u>3,3'-Dimethoxybenzidine</u>
<u>U092</u>	<u>124-40-3</u>	<u>Dimethylamine (I)</u>
<u>U093</u>	<u>60-11-7</u>	<u>p-Dimethylaminoazobenzene</u>
<u>U094</u>	<u>57-97-6</u>	<u>7,12-Dimethylbenz[a]anthracene</u>
<u>U095</u>	<u>119-93-7</u>	<u>3,3'-Dimethylbenzidine</u>
<u>U096</u>	<u>80-15-9</u>	<u>alpha, alpha-Dimethylbenzylhydroperoxide (R)</u>
<u>U097</u>	<u>79-44-7</u>	<u>Dimethylcarbamoyl chloride</u>
<u>U098</u>	<u>57-14-7</u>	<u>1,1-Dimethylhydrazine</u>
<u>U099</u>	<u>540-73-8</u>	<u>1,2-Dimethylhydrazine</u>
<u>U101</u>	<u>105-67-9</u>	<u>2,4-Dimethylphenol</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U102</u>	<u>131-11-3</u>	<u>Dimethyl phthalate</u>
<u>U103</u>	<u>77-78-1</u>	<u>Dimethyl sulfate</u>
<u>U105</u>	<u>121-14-2</u>	<u>2,4-Dinitrotoluene</u>
<u>U106</u>	<u>606-20-2</u>	<u>2,6-Dinitrotoluene</u>
<u>U107</u>	<u>117-84-0</u>	<u>Di-n-octyl phthalate</u>
<u>U108</u>	<u>123-91-1</u>	<u>1,4-Dioxane</u>
<u>U109</u>	<u>122-66-7</u>	<u>1,2-Diphenylhydrazine</u>
<u>U110</u>	<u>142-84-7</u>	<u>Dipropylamine (l)</u>
<u>U111</u>	<u>621-64-7</u>	<u>Di-n-propylnitrosamine</u>
<u>U041</u>	<u>106-89-8</u>	<u>Epichlorohydrin</u>
<u>U001</u>	<u>75-07-0</u>	<u>Ethanal (l)</u>
<u>U174</u>	<u>55-18-5</u>	<u>Ethanamine, N-ethyl-N-nitroso-</u>
<u>U404</u>	<u>121-44-8</u>	<u>Ethanamine, N,N-diethyl-</u>
<u>U155</u>	<u>91-80-5</u>	<u>1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-</u>
<u>U067</u>	<u>106-93-4</u>	<u>Ethane, 1,2-dibromo-</u>
<u>U076</u>	<u>75-34-3</u>	<u>Ethane, 1,1-dichloro-</u>
<u>U077</u>	<u>107-06-2</u>	<u>Ethane, 1,2-dichloro-</u>
<u>U131</u>	<u>67-72-1</u>	<u>Ethane, hexachloro-</u>
<u>U024</u>	<u>111-91-1</u>	<u>Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-</u>
<u>U117</u>	<u>60-29-7</u>	<u>Ethane, 1,1'-oxybis- (l)</u>
<u>U025</u>	<u>111-44-4</u>	<u>Ethane, 1,1'-oxybis[2-chloro-</u>
<u>U184</u>	<u>76-01-7</u>	<u>Ethane, pentachloro-</u>
<u>U208</u>	<u>630-20-6</u>	<u>Ethane, 1,1,1,2-tetrachloro-</u>
<u>U209</u>	<u>79-34-5</u>	<u>Ethane, 1,1,2,2-tetrachloro-</u>
<u>U218</u>	<u>62-55-5</u>	<u>Ethanethioamide</u>
<u>U226</u>	<u>71-55-6</u>	<u>Ethane, 1,1,1-trichloro-</u>
<u>U227</u>	<u>79-00-5</u>	<u>Ethane, 1,1,2-trichloro-</u>
<u>U394</u>	<u>30558-43-1</u>	<u>Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester.</u>
<u>U410</u>	<u>59669-26-0</u>	<u>Ethanimidothioic acid, N,N'- [thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester</u>
<u>U359</u>	<u>110-80-5</u>	<u>Ethanol, 2-ethoxy-</u>
<u>U173</u>	<u>1116-54-7</u>	<u>Ethanol, 2,2'-(nitrosoimino)bis-</u>
<u>U395</u>	<u>5952-26-1</u>	<u>Ethanol, 2,2'-oxybis-, dicarbamate.</u>
<u>U004</u>	<u>98-86-2</u>	<u>Ethanone, 1-phenyl-</u>
<u>U043</u>	<u>75-01-4</u>	<u>Ethene, chloro-</u>
<u>U042</u>	<u>110-75-8</u>	<u>Ethene, (2-chloroethoxy)-</u>
<u>U078</u>	<u>75-35-4</u>	<u>Ethene, 1,1-dichloro-</u>
<u>U079</u>	<u>156-60-5</u>	<u>Ethene, 1,2-dichloro-, (E)-</u>
<u>U210</u>	<u>127-18-4</u>	<u>Ethene, tetrachloro-</u>
<u>U228</u>	<u>79-01-6</u>	<u>Ethene, trichloro-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U112</u>	<u>141-78-6</u>	<u>Ethyl acetate (l)</u>
<u>U113</u>	<u>140-88-5</u>	<u>Ethyl acrylate (l)</u>
<u>U238</u>	<u>51-79-6</u>	<u>Ethyl carbamate (urethane)</u>
<u>U117</u>	<u>60-29-7</u>	<u>Ethyl ether (l)</u>
<u>U114</u>	<u>1111-54-6</u>	<u>Ethylenebisdithiocarbamic acid, salts and esters</u>
<u>U067</u>	<u>106-93-4</u>	<u>Ethylene dibromide</u>
<u>U077</u>	<u>107-06-2</u>	<u>Ethylene dichloride</u>
<u>U359</u>	<u>110-80-5</u>	<u>Ethylene glycol monoethyl ether</u>
<u>U115</u>	<u>75-21-8</u>	<u>Ethylene oxide (l,T)</u>
<u>U116</u>	<u>96-45-7</u>	<u>Ethylenethiourea</u>
<u>U076</u>	<u>75-34-3</u>	<u>Ethylidene dichloride</u>
<u>U118</u>	<u>97-63-2</u>	<u>Ethyl methacrylate</u>
<u>U119</u>	<u>62-50-0</u>	<u>Ethyl methanesulfonate</u>
<u>U120</u>	<u>206-44-0</u>	<u>Fluoranthene</u>
<u>U122</u>	<u>50-00-0</u>	<u>Formaldehyde</u>
<u>U123</u>	<u>64-18-6</u>	<u>Formic acid (C,T)</u>
<u>U124</u>	<u>110-00-9</u>	<u>Furan (l)</u>
<u>U125</u>	<u>98-01-1</u>	<u>2-Furancarboxaldehyde (l)</u>
<u>U147</u>	<u>108-31-6</u>	<u>2,5-Furandione</u>
<u>U213</u>	<u>109-99-9</u>	<u>Furan, tetrahydro- (l)</u>
<u>U125</u>	<u>98-01-1</u>	<u>Furfural (l)</u>
<u>U124</u>	<u>110-00-9</u>	<u>Furfuran (l)</u>
<u>U206</u>	<u>18883-66-4</u>	<u>Glucopyranose, 2-deoxy-2(3-methyl-3-nitroso-ureido)-, D-</u>
<u>U206</u>	<u>18883-66-4</u>	<u>D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-</u>
<u>U126</u>	<u>765-34-4</u>	<u>Glycidylaldehyde</u>
<u>U163</u>	<u>70-25-7</u>	<u>Guanidine, N-methyl-N'-nitro-N-nitroso-</u>
<u>U127</u>	<u>118-74-1</u>	<u>Hexachlorobenzene</u>
<u>U128</u>	<u>87-68-3</u>	<u>Hexachlorobutadiene</u>
<u>U130</u>	<u>77-47-4</u>	<u>Hexachlorocyclopentadiene</u>
<u>U131</u>	<u>67-72-1</u>	<u>Hexachloroethane</u>
<u>U132</u>	<u>70-30-4</u>	<u>Hexachlorophene</u>
<u>U243</u>	<u>1888-71-7</u>	<u>Hexachloropropene</u>
<u>U133</u>	<u>302-01-2</u>	<u>Hydrazine (R,T)</u>
<u>U086</u>	<u>1615-80-1</u>	<u>Hydrazine, 1,2-diethyl-</u>
<u>U098</u>	<u>57-14-7</u>	<u>Hydrazine, 1,1-dimethyl-</u>
<u>U099</u>	<u>540-73-8</u>	<u>Hydrazine, 1,2-dimethyl-</u>
<u>U109</u>	<u>122-66-7</u>	<u>Hydrazine, 1,2-diphenyl-</u>
<u>U134</u>	<u>7664-39-3</u>	<u>Hydrofluoric acid (C,T)</u>
<u>U134</u>	<u>7664-39-3</u>	<u>Hydrogen fluoride (C,T)</u>
<u>U135</u>	<u>7783-06-4</u>	<u>Hydrogen sulfide</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U135</u>	<u>7783-06-4</u>	<u>Hydrogen sulfide H₂S</u>
<u>U096</u>	<u>80-15-9</u>	<u>Hydroperoxide, 1-methyl-1-phenylethyl- (R)</u>
<u>U116</u>	<u>96-45-7</u>	<u>2-Imidazolidinethione</u>
<u>U137</u>	<u>193-39-5</u>	<u>Indeno[1,2,3-cd]pyrene</u>
<u>U190</u>	<u>85-44-9</u>	<u>1,3-Isobenzofurandione</u>
<u>U140</u>	<u>78-83-1</u>	<u>Isobutyl alcohol (I,T)</u>
<u>U141</u>	<u>120-58-1</u>	<u>Isosafrole</u>
<u>U142</u>	<u>143-50-0</u>	<u>Kepone</u>
<u>U143</u>	<u>303-34-4</u>	<u>Lasiocarpine</u>
<u>U144</u>	<u>301-04-2</u>	<u>Lead acetate</u>
<u>U146</u>	<u>1335-32-6</u>	<u>Lead, bis(acetato-O)tetrahydroxytri-</u>
<u>U145</u>	<u>7446-27-7</u>	<u>Lead phosphate</u>
<u>U146</u>	<u>1335-32-6</u>	<u>Lead subacetate</u>
<u>U129</u>	<u>58-89-9</u>	<u>Lindane</u>
<u>U163</u>	<u>70-25-7</u>	<u>MNNG</u>
<u>U147</u>	<u>108-31-6</u>	<u>Maleic anhydride</u>
<u>U148</u>	<u>123-33-1</u>	<u>Maleic hydrazide</u>
<u>U149</u>	<u>109-77-3</u>	<u>Malononitrile</u>
<u>U150</u>	<u>148-82-3</u>	<u>Melphalan</u>
<u>U151</u>	<u>7439-97-6</u>	<u>Mercury</u>
<u>U152</u>	<u>126-98-7</u>	<u>Methacrylonitrile (I,T)</u>
<u>U092</u>	<u>124-40-3</u>	<u>Methanamine, N-methyl- (I)</u>
<u>U029</u>	<u>74-83-9</u>	<u>Methane, bromo-</u>
<u>U045</u>	<u>74-87-3</u>	<u>Methane, chloro- (I,T)</u>
<u>U046</u>	<u>107-30-2</u>	<u>Methane, chloromethoxy-</u>
<u>U068</u>	<u>74-95-3</u>	<u>Methane, dibromo-</u>
<u>U080</u>	<u>75-09-2</u>	<u>Methane, dichloro-</u>
<u>U075</u>	<u>75-71-8</u>	<u>Methane, dichlorodifluoro-</u>
<u>U138</u>	<u>74-88-4</u>	<u>Methane, iodo-</u>
<u>U119</u>	<u>62-50-0</u>	<u>Methanesulfonic acid, ethyl ester</u>
<u>U211</u>	<u>56-23-5</u>	<u>Methane, tetrachloro-</u>
<u>U153</u>	<u>74-93-1</u>	<u>Methanethiol (I,T)</u>
<u>U225</u>	<u>75-25-2</u>	<u>Methane, tribromo-</u>
<u>U044</u>	<u>67-66-3</u>	<u>Methane, trichloro-</u>
<u>U121</u>	<u>75-69-4</u>	<u>Methane, trichlorofluoro-</u>
<u>U036</u>	<u>57-74-9</u>	<u>4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-</u>
<u>U154</u>	<u>67-56-1</u>	<u>Methanol (I)</u>
<u>U155</u>	<u>91-80-5</u>	<u>Methapyrilene</u>
<u>U142</u>	<u>143-50-0</u>	<u>1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U247</u>	<u>72-43-5</u>	<u>Methoxychlor</u>
<u>U154</u>	<u>67-56-1</u>	<u>Methyl alcohol (I)</u>
<u>U029</u>	<u>74-83-9</u>	<u>Methyl bromide</u>
<u>U186</u>	<u>504-60-9</u>	<u>1-Methylbutadiene (I)</u>
<u>U045</u>	<u>74-87-3</u>	<u>Methyl chloride (I,T)</u>
<u>U156</u>	<u>79-22-1</u>	<u>Methyl chlorocarbonate (I,T)</u>
<u>U226</u>	<u>71-55-6</u>	<u>Methyl chloroform</u>
<u>U157</u>	<u>56-49-5</u>	<u>3-Methylcholanthrene</u>
<u>U158</u>	<u>101-14-4</u>	<u>4,4'-Methylenebis(2-chloroaniline)</u>
<u>U068</u>	<u>74-95-3</u>	<u>Methylene bromide</u>
<u>U080</u>	<u>75-09-2</u>	<u>Methylene chloride</u>
<u>U159</u>	<u>78-93-3</u>	<u>Methyl ethyl ketone (MEK) (I,T)</u>
<u>U160</u>	<u>1338-23-4</u>	<u>Methyl ethyl ketone peroxide (R,T)</u>
<u>U138</u>	<u>74-88-4</u>	<u>Methyl iodide</u>
<u>U161</u>	<u>108-10-1</u>	<u>Methyl isobutyl ketone (I)</u>
<u>U162</u>	<u>80-62-6</u>	<u>Methyl methacrylate (I,T)</u>
<u>U161</u>	<u>108-10-1</u>	<u>4-Methyl-2-pentanone (I)</u>
<u>U164</u>	<u>56-04-2</u>	<u>Methylthiouracil</u>
<u>U010</u>	<u>50-07-7</u>	<u>Mitomycin C</u>
<u>U059</u>	<u>20830-81-3</u>	<u>5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-</u>
<u>U167</u>	<u>134-32-7</u>	<u>1-Naphthalenamine</u>
<u>U168</u>	<u>91-59-8</u>	<u>2-Naphthalenamine</u>
<u>U026</u>	<u>494-03-1</u>	<u>Naphthalenamine, N,N'-bis(2-chloroethyl)-</u>
<u>U165</u>	<u>91-20-3</u>	<u>Naphthalene</u>
<u>U047</u>	<u>91-58-7</u>	<u>Naphthalene, 2-chloro-</u>
<u>U166</u>	<u>130-15-4</u>	<u>1,4-Naphthalenedione</u>
<u>U236</u>	<u>72-57-1</u>	<u>2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt</u>
<u>U279</u>	<u>63-25-2</u>	<u>1-Naphthalenol, methylcarbamate</u>
<u>U166</u>	<u>130-15-4</u>	<u>1,4-Naphthoquinone</u>
<u>U167</u>	<u>134-2-7</u>	<u>alpha-Naphthylamine</u>
<u>U168</u>	<u>91-59-8</u>	<u>beta-Naphthylamine</u>
<u>U217</u>	<u>10102-45-1</u>	<u>Nitric acid, thallium(1+) salt</u>
<u>U169</u>	<u>98-95-3</u>	<u>Nitrobenzene (I,T)</u>
<u>U170</u>	<u>100-02-7</u>	<u>p-Nitrophenol</u>
<u>U171</u>	<u>79-46-9</u>	<u>2-Nitropropane (I,T)</u>
<u>U172</u>	<u>924-16-3</u>	<u>N-Nitrosodi-n-butylamine</u>
<u>U173</u>	<u>1116-54-7</u>	<u>N-Nitrosodiethanolamine</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U174</u>	<u>55-18-5</u>	<u>N-Nitrosodiethylamine</u>
<u>U176</u>	<u>759-73-9</u>	<u>N-Nitroso-N-ethylurea</u>
<u>U177</u>	<u>684-93-5</u>	<u>N-Nitroso-N-methylurea</u>
<u>U178</u>	<u>615-53-2</u>	<u>N-Nitroso-N-methylurethane</u>
<u>U179</u>	<u>100-75-4</u>	<u>N-Nitrosopiperidine</u>
<u>U180</u>	<u>930-55-2</u>	<u>N-Nitrosopyrrolidine</u>
<u>U181</u>	<u>99-55-8</u>	<u>5-Nitro-o-toluidine</u>
<u>U193</u>	<u>1120-71-4</u>	<u>1,2-Oxathiolane, 2,2-dioxide</u>
<u>U058</u>	<u>50-18-0</u>	<u>2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-,2-oxide</u>
<u>U115</u>	<u>75-21-8</u>	<u>Oxirane (I,T)</u>
<u>U126</u>	<u>765-34-4</u>	<u>Oxiranecarboxyaldehyde</u>
<u>U041</u>	<u>106-89-8</u>	<u>Oxirane, (chloromethyl)-</u>
<u>U182</u>	<u>123-63-7</u>	<u>Paraldehyde</u>
<u>U183</u>	<u>608-93-5</u>	<u>Pentachlorobenzene</u>
<u>U184</u>	<u>76-01-7</u>	<u>Pentachloroethane</u>
<u>U185</u>	<u>82-68-8</u>	<u>Pentachloronitrobenzene (PCNB)</u>
<u>See F027</u>	<u>87-86-5</u>	<u>Pentachlorophenol</u>
<u>U161</u>	<u>108-10-1</u>	<u>Pentanol, 4-methyl-</u>
<u>U186</u>	<u>504-60-9</u>	<u>1,3-Pentadiene (I)</u>
<u>U187</u>	<u>62-44-2</u>	<u>Phenacetin</u>
<u>U188</u>	<u>108-95-2</u>	<u>Phenol</u>
<u>U048</u>	<u>95-57-8</u>	<u>Phenol, 2-chloro-</u>
<u>U039</u>	<u>59-50-7</u>	<u>Phenol, 4-chloro-3-methyl-</u>
<u>U081</u>	<u>120-83-2</u>	<u>Phenol, 2,4-dichloro-</u>
<u>U082</u>	<u>87-65-0</u>	<u>Phenol, 2,6-dichloro-</u>
<u>U089</u>	<u>56-53-1</u>	<u>Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-</u>
<u>U101</u>	<u>105-67-9</u>	<u>Phenol, 2,4-dimethyl-</u>
<u>U052</u>	<u>1319-77-3</u>	<u>Phenol, methyl-</u>
<u>U132</u>	<u>70-30-4</u>	<u>Phenol, 2,2'-methylenebis[3,4,6-trichloro-</u>
<u>U411</u>	<u>114-26-1</u>	<u>Phenol, 2-(1-methylethoxy)-, methylcarbamate</u>
<u>U170</u>	<u>100-02-7</u>	<u>Phenol, 4-nitro-</u>
<u>See F027</u>	<u>87-86-5</u>	<u>Phenol, pentachloro-</u>
<u>See F027</u>	<u>58-90-2</u>	<u>Phenol, 2,3,4,6-tetrachloro-</u>
<u>See F027</u>	<u>95-95-4</u>	<u>Phenol, 2,4,5-trichloro-</u>
<u>See F027</u>	<u>88-06-2</u>	<u>Phenol, 2,4,6-trichloro-</u>
<u>U150</u>	<u>148-82-3</u>	<u>L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-</u>
<u>U145</u>	<u>7446-27-7</u>	<u>Phosphoric acid, lead(2+) salt (2:3)</u>
<u>U087</u>	<u>3288-58-2</u>	<u>Phosphorodithioic acid, 0,0-diethyl S-methyl ester</u>
<u>U189</u>	<u>1314-80-3</u>	<u>Phosphorus sulfide (R)</u>
<u>U190</u>	<u>85-44-9</u>	<u>Phthalic anhydride</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U191</u>	<u>109-06-8</u>	<u>2-Picoline</u>
<u>U179</u>	<u>100-75-4</u>	<u>Piperidine, 1-nitroso-</u>
<u>U192</u>	<u>23950-58-5</u>	<u>Pronamide</u>
<u>U194</u>	<u>107-10-8</u>	<u>1-Propanamine (I,T)</u>
<u>U111</u>	<u>621-64-7</u>	<u>1-Propanamine, N-nitroso-N-propyl-</u>
<u>U110</u>	<u>142-84-7</u>	<u>1-Propanamine, N-propyl- (I)</u>
<u>U066</u>	<u>96-12-8</u>	<u>Propane, 1,2-dibromo-3-chloro-</u>
<u>U083</u>	<u>78-87-5</u>	<u>Propane, 1,2-dichloro-</u>
<u>U149</u>	<u>109-77-3</u>	<u>Propanedinitrile</u>
<u>U171</u>	<u>79-46-9</u>	<u>Propane, 2-nitro- (I,T)</u>
<u>U027</u>	<u>108-60-1</u>	<u>Propane, 2,2'-oxybis[2-chloro-</u>
<u>U193</u>	<u>1120-71-4</u>	<u>1,3-Propane sultone</u>
<u>See F027</u>	<u>93-72-1</u>	<u>Propanoic acid, 2-(2,4,5-trichlorophenoxy)-</u>
<u>U235</u>	<u>126-72-7</u>	<u>1-Propanol, 2,3-dibromo-, phosphate (3:1)</u>
<u>U140</u>	<u>78-83-1</u>	<u>1-Propanol, 2-methyl- (I,T)</u>
<u>U002</u>	<u>67-64-1</u>	<u>2-Propanone (I)</u>
<u>U007</u>	<u>79-06-1</u>	<u>2-Propenamide</u>
<u>U084</u>	<u>542-75-6</u>	<u>1-Propene, 1,3-dichloro-</u>
<u>U243</u>	<u>1888-71-7</u>	<u>1-Propene, 1,1,2,3,3,3-hexachloro-</u>
<u>U009</u>	<u>107-13-1</u>	<u>2-Propenenitrile</u>
<u>U152</u>	<u>126-98-7</u>	<u>2-Propenenitrile, 2-methyl- (I,T)</u>
<u>U008</u>	<u>79-10-7</u>	<u>2-Propenoic acid (I)</u>
<u>U113</u>	<u>140-88-5</u>	<u>2-Propenoic acid, ethyl ester (I)</u>
<u>U118</u>	<u>97-63-2</u>	<u>2-Propenoic acid, 2-methyl-, ethyl ester</u>
<u>U162</u>	<u>80-62-6</u>	<u>2-Propenoic acid, 2-methyl-, methyl ester (I,T)</u>
<u>U373</u>	<u>122-42-9</u>	<u>Propham</u>
<u>U411</u>	<u>114-26-1</u>	<u>Propoxur</u>
<u>U194</u>	<u>107-10-8</u>	<u>n-Propylamine (I,T)</u>
<u>U083</u>	<u>78-87-5</u>	<u>Propylene dichloride</u>
<u>U387</u>	<u>52888-80-9</u>	<u>Prosulfocarb</u>
<u>U148</u>	<u>123-33-1</u>	<u>3,6-Pyridazinedione, 1,2-dihydro-</u>
<u>U196</u>	<u>110-86-1</u>	<u>Pyridine</u>
<u>U191</u>	<u>109-06-8</u>	<u>Pyridine, 2-methyl-</u>
<u>U237</u>	<u>66-75-1</u>	<u>2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-</u>
<u>U164</u>	<u>56-04-2</u>	<u>4-(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-</u>
<u>U180</u>	<u>930-55-2</u>	<u>Pyrrolidine, 1-nitroso-</u>
<u>U200</u>	<u>50-55-5</u>	<u>Reserpine</u>
<u>U201</u>	<u>108-46-3</u>	<u>Resorcinol</u>
<u>U203</u>	<u>94-59-7</u>	<u>Safrole</u>
<u>U204</u>	<u>7783-00-8</u>	<u>Selenious acid</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
U204	<u>7783-00-8</u>	<u>Selenium dioxide</u>
U205	<u>7488-56-4</u>	<u>Selenium sulfide</u>
U205	<u>7488-56-4</u>	<u>Selenium sulfide SeS₂ (R,T)</u>
U015	<u>115-02-6</u>	<u>L-Serine, diazoacetate (ester)</u>
See F027	<u>93-72-1</u>	<u>Silvex (2,4,5-TP)</u>
U206	<u>18883-66-4</u>	<u>Streptozotocin</u>
U103	<u>77-78-1</u>	<u>Sulfuric acid, dimethyl ester</u>
U189	<u>1314-80-3</u>	<u>Sulfur phosphide (R)</u>
See F027	<u>93-76-5</u>	<u>2,4,5-T</u>
U207	<u>95-94-3</u>	<u>1,2,4,5-Tetrachlorobenzene</u>
U208	<u>630-20-6</u>	<u>1,1,1,2-Tetrachloroethane</u>
U209	<u>79-34-5</u>	<u>1,1,2,2-Tetrachloroethane</u>
U210	<u>127-18-4</u>	<u>Tetrachloroethylene</u>
See F027	<u>58-90-2</u>	<u>2,3,4,6-Tetrachlorophenol</u>
U213	<u>109-99-9</u>	<u>Tetrahydrofuran (l)</u>
U214	<u>563-68-8</u>	<u>Thallium(I) acetate</u>
U215	<u>6533-73-9</u>	<u>Thallium(I) carbonate</u>
U216	<u>7791-12-0</u>	<u>Thallium(I) chloride</u>
U216	<u>7791-12-0</u>	<u>Thallium chloride TlCl</u>
U217	<u>10102-45-1</u>	<u>Thallium(I) nitrate</u>
U218	<u>62-55-5</u>	<u>Thioacetamide</u>
U410	<u>59669-26-0</u>	<u>Thiodicarb</u>
U153	<u>74-93-1</u>	<u>Thiomethanol (l,T)</u>
U244	<u>137-26-8</u>	<u>Thioperoxydicarbonic diamide [(H₂N)C(S)]₂S₂, tetramethyl-</u>
U409	<u>23564-05-8</u>	<u>Thiophanate-methyl</u>
U219	<u>62-56-6</u>	<u>Thiourea</u>
U244	<u>137-26-8</u>	<u>Thiram</u>
U220	<u>108-88-3</u>	<u>Toluene</u>
U221	<u>25376-45-8</u>	<u>Toluenediamine</u>
U223	<u>26471-62-5</u>	<u>Toluene diisocyanate (R,T)</u>
U328	<u>95-53-4</u>	<u>o-Toluidine</u>
U353	<u>106-49-0</u>	<u>p-Toluidine</u>
U222	<u>636-21-5</u>	<u>o-Toluidine hydrochloride</u>
U389	<u>2303-17-5</u>	<u>Triallate</u>
U011	<u>61-82-5</u>	<u>1H-1,2,4-Triazol-3-amine</u>
U408	<u>118-79-6</u>	<u>2,4,6-Tribromophenol</u>
U226	<u>71-55-6</u>	<u>1,1,1-Trichloroethane</u>
U227	<u>79-00-5</u>	<u>1,1,2-Trichloroethane</u>
U228	<u>79-01-6</u>	<u>Trichloroethylene</u>
U121	<u>75-69-4</u>	<u>Trichloromonofluoromethane</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>See F027</u>	<u>95-95-4</u>	<u>2,4,5-Trichlorophenol</u>
<u>See F027</u>	<u>88-06-2</u>	<u>2,4,6-Trichlorophenol</u>
<u>U404</u>	<u>121-44-8</u>	<u>Triethylamine</u>
<u>U234</u>	<u>99-35-4</u>	<u>1,3,5-Trinitrobenzene (R,T)</u>
<u>U182</u>	<u>123-63-7</u>	<u>1,3,5-Trioxane, 2,4,6-trimethyl-</u>
<u>U235</u>	<u>126-72-7</u>	<u>Tris (2,3-dibromopropyl) phosphate</u>
<u>U236</u>	<u>72-57-1</u>	<u>Trypan blue</u>
<u>U237</u>	<u>66-75-1</u>	<u>Uracil mustard</u>
<u>U176</u>	<u>759-73-9</u>	<u>Urea, N-ethyl-N-nitroso-</u>
<u>U177</u>	<u>684-93-5</u>	<u>Urea, N-methyl-N-nitroso-</u>
<u>U043</u>	<u>75-01-4</u>	<u>Vinyl chloride</u>
<u>U248</u>	<u>181-81-2</u>	<u>Warfarin, and salts, when present at concentrations of 0.3% or less</u>
<u>U239</u>	<u>1330-20-7</u>	<u>Xylene (l)</u>
<u>U200</u>	<u>50-55-5</u>	<u>Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-.methyl ester, (3beta.16beta.17alpha.18beta.20alpha)-</u>
<u>U249</u>	<u>1314-84-7</u>	<u>Zinc phosphide Zn₃P₂, when present at concentrations of 10% or less</u>
<u>U001</u>	<u>75-07-0</u>	<u>Acetaldehyde (l)</u>
<u>U001</u>	<u>75-07-0</u>	<u>Ethanal (l)</u>
<u>U002</u>	<u>67-64-1</u>	<u>Acetone (l)</u>
<u>U002</u>	<u>67-64-1</u>	<u>2-Propanone (l)</u>
<u>U003</u>	<u>75-05-8</u>	<u>Acetonitrile (l,T)</u>
<u>U004</u>	<u>98-86-2</u>	<u>Acetophenone</u>
<u>U004</u>	<u>98-86-2</u>	<u>Ethanone,1-phenyl-</u>
<u>U005</u>	<u>53-96-3</u>	<u>Acetamide,-9H-fluoren-2-yl-</u>
<u>U005</u>	<u>53-96-3</u>	<u>2-Acetylaminofluorene</u>
<u>U006</u>	<u>75-36-5</u>	<u>Acetyl chloride (C,R,T)</u>
<u>U007</u>	<u>79-06-1</u>	<u>Acrylamide</u>
<u>U007</u>	<u>79-06-1</u>	<u>2-Propenamide</u>
<u>U008</u>	<u>79-10-7</u>	<u>Acrylic acid (l)</u>
<u>U008</u>	<u>79-10-7</u>	<u>2-Propenoic acid (l)</u>
<u>U009</u>	<u>107-13-1</u>	<u>Acrylonitrile</u>
<u>U009</u>	<u>107-13-1</u>	<u>2-Propenenitrile</u>
<u>U010</u>	<u>50-07-7</u>	<u>Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[[aminocarbonyl]oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8aalpha,8balpha)]-</u>
<u>U010</u>	<u>50-07-7</u>	<u>Mitomycin C</u>
<u>U011</u>	<u>61-82-5</u>	<u>Amitrole</u>
<u>U011</u>	<u>61-82-5</u>	<u>1H-1,2,4-Triazol-3-amine</u>
<u>U012</u>	<u>62-53-3</u>	<u>Aniline (l,T)</u>
<u>U012</u>	<u>62-53-3</u>	<u>Benzenamine (l,T)</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U014</u>	<u>492-80-8</u>	<u>Auramine</u>
<u>U014</u>	<u>492-80-8</u>	<u>Benzenamine, 4,4'-carbonimidoylbis[N,` dimethyl-</u>
<u>U015</u>	<u>115-02-6</u>	<u>Azaserine</u>
<u>U015</u>	<u>115-02-6</u>	<u>L-Serine, diazoacetate (ester)</u>
<u>U016</u>	<u>225-51-4</u>	<u>Benz[c]acridine</u>
<u>U017</u>	<u>98-87-3</u>	<u>Benzalchloride</u>
<u>U017</u>	<u>98-87-3</u>	<u>Benzene, (dichloromethyl)-</u>
<u>U018</u>	<u>56-55-3</u>	<u>Benz[a]anthracene</u>
<u>U019</u>	<u>71-43-2</u>	<u>Benzene (l,T)</u>
<u>U020</u>	<u>98-09-9</u>	<u>Benzenesulfonic acidchloride (C,R)</u>
<u>U020</u>	<u>98-09-9</u>	<u>Benzenesulfonylchloride (C,R)</u>
<u>U021</u>	<u>92-87-5</u>	<u>Benzidine</u>
<u>U021</u>	<u>92-87-5</u>	<u>[1,1'-Biphenyl]-4,4'-diamine</u>
<u>U022</u>	<u>50-32-8</u>	<u>Benzo[a]pyrene</u>
<u>U023</u>	<u>98-07-7</u>	<u>Benzene, (trichloromethyl)-</u>
<u>U023</u>	<u>98-07-7</u>	<u>Benzotrichloride (C,R,T)</u>
<u>U024</u>	<u>111-91-1</u>	<u>Dichloromethoxyethane</u>
<u>U024</u>	<u>111-91-1</u>	<u>Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-</u>
<u>U025</u>	<u>111-44-4</u>	<u>Dichloroethy lether</u>
<u>U025</u>	<u>111-44-4</u>	<u>Ethane, 1,1'-oxybis[2-chloro-</u>
<u>U026</u>	<u>494-03-1</u>	<u>Chlornaphazin</u>
<u>U026</u>	<u>494-03-1</u>	<u>Naphthalenamine, N,N'-bis(2-chloroethyl)-</u>
<u>U027</u>	<u>108-60-1</u>	<u>Dichloroisopropyl ether</u>
<u>U027</u>	<u>108-60-1</u>	<u>Propane, 2,2'-oxybis[2-chloro-</u>
<u>U028</u>	<u>117-81-7</u>	<u>1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester</u>
<u>U028</u>	<u>117-81-7</u>	<u>Diethylhexyl phthalate</u>
<u>U029</u>	<u>74-83-9</u>	<u>Methane, bromo-</u>
<u>U029</u>	<u>74-83-9</u>	<u>Methyl bromide</u>
<u>U030</u>	<u>101-55-3</u>	<u>Benzene, 1-bromo-4-phenoxy-</u>
<u>U030</u>	<u>101-55-3</u>	<u>4-Bromophenyl phenyl ether</u>
<u>U031</u>	<u>71-36-3</u>	<u>1-Butanol (l)</u>
<u>U031</u>	<u>71-36-3</u>	<u>n-Butyl alcohol (l)</u>
<u>U032</u>	<u>13765-19-0</u>	<u>Calcium chromate</u>
<u>U032</u>	<u>13765-19-0</u>	<u>Chromic acid H₂CrO₄, calcium salt</u>
<u>U033</u>	<u>353-50-4</u>	<u>Carbonic difluoride</u>
<u>U033</u>	<u>353-50-4</u>	<u>Carbon oxyfluoride (R,T)</u>
<u>U034</u>	<u>75-87-6</u>	<u>Acetaldehyde, trichloro-</u>
<u>U034</u>	<u>75-87-6</u>	<u>Chloral</u>
<u>U035</u>	<u>305-03-3</u>	<u>Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-</u>
<u>U035</u>	<u>305-03-3</u>	<u>Chlorambucil</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
U036	57-74-9	Chlordane, alpha & gamma isomers
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U037	108-90-7	Benzene, chloro-
U037	108-90-7	Chlorobenzene
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U041	106-89-8	Epichlorohydrin
U041	106-89-8	Oxirane, (chloromethyl)-
U042	110-75-8	2-Chloroethyl vinyl ether
U042	110-75-8	Ethene, (2-chloroethoxy)-
U043	75-01-4	Ethene, chloro-
U043	75-01-4	Vinyl chloride
U044	67-66-3	Chloroform
U044	67-66-3	Methane, trichloro-
U045	74-87-3	Methane, chloro- (l,t)
U045	74-87-3	Methylchloride (l,t)
U046	107-30-2	Chloromethyl methyl ether
U046	107-30-2	Methane, chloromethoxy-
U047	91-58-7	beta-Chloronaphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U048	95-57-8	o-Chlorophenol
U048	95-57-8	Phenol, 2-chloro-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U050	218-01-9	Chrysene
U051	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U052	1319-77-3	Phenol, methyl-
U053	4170-30-3	2-Butenal
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Benzene, (1-methylethyl)- (l)
U055	98-82-8	Cumene (l)
U056	110-82-7	Benzene, hexahydro- (l)
U056	110-82-7	Cyclohexane (l)
U057	108-94-1	Cyclohexanone (l)
U058	50-18-0	Cyclophosphamide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U059</u>	<u>20830-81-3</u>	<u>Daunomycin</u>
<u>U059</u>	<u>20830-81-3</u>	<u>5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-</u>
<u>U060</u>	<u>72-54-8</u>	<u>Benzene, 1, 1'-(2,2-dichloroethylidene)bis[4-chloro-</u>
<u>U060</u>	<u>72-54-8</u>	<u>DDD</u>
<u>U061</u>	<u>50-29-3</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-</u>
<u>U061</u>	<u>50-29-3</u>	<u>DDT</u>
<u>U062</u>	<u>2303-16-4</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester</u>
<u>U062</u>	<u>2303-16-4</u>	<u>Diallate</u>
<u>U063</u>	<u>53-70-3</u>	<u>Dibenz[a,h]anthracene</u>
<u>U064</u>	<u>189-55-9</u>	<u>Benzo[rs]pentaphene</u>
<u>U064</u>	<u>189-55-9</u>	<u>Dibenzo[a,i]pyrene</u>
<u>U066</u>	<u>96-12-8</u>	<u>1,2-Dibromo-3-chloropropane</u>
<u>U066</u>	<u>96-12-8</u>	<u>Propane, 1,2-dibromo-3-chloro-</u>
<u>U067</u>	<u>106-93-4</u>	<u>Ethane, 1,2-dibromo-</u>
<u>U067</u>	<u>106-93-4</u>	<u>Ethylene dibromide</u>
<u>U068</u>	<u>74-95-3</u>	<u>Methane, dibromo-</u>
<u>U068</u>	<u>74-95-3</u>	<u>Methylene bromide</u>
<u>U069</u>	<u>84-74-2</u>	<u>1,2-Benzenedicarboxylic acid, dibutyl ester</u>
<u>U069</u>	<u>84-74-2</u>	<u>Dibutyl phthalate</u>
<u>U070</u>	<u>95-50-1</u>	<u>Benzene, 1,2-dichloro-</u>
<u>U070</u>	<u>95-50-1</u>	<u>o-Dichlorobenzene</u>
<u>U071</u>	<u>541-73-1</u>	<u>Benzene, 1,3-dichloro-</u>
<u>U071</u>	<u>541-73-1</u>	<u>m-Dichlorobenzene</u>
<u>U072</u>	<u>106-46-7</u>	<u>Benzene, 1,4-dichloro-</u>
<u>U072</u>	<u>106-46-7</u>	<u>p-Dichlorobenzene</u>
<u>U073</u>	<u>91-94-1</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-</u>
<u>U073</u>	<u>91-94-1</u>	<u>3,3'-Dichlorobenzidine</u>
<u>U074</u>	<u>764-41-0</u>	<u>2-Butene, 1,4-dichloro- (I,T)</u>
<u>U074</u>	<u>764-41-0</u>	<u>1,4-Dichloro-2-butene (I,T)</u>
<u>U075</u>	<u>75-71-8</u>	<u>Dichlorodifluoromethane</u>
<u>U075</u>	<u>75-71-8</u>	<u>Methane, dichlorodifluoro-</u>
<u>U076</u>	<u>75-34-3</u>	<u>Ethane, 1,1-dichloro-</u>
<u>U076</u>	<u>75-34-3</u>	<u>Ethylidene dichloride</u>
<u>U077</u>	<u>107-06-2</u>	<u>Ethane, 1,2-dichloro-</u>
<u>U077</u>	<u>107-06-2</u>	<u>Ethylene dichloride</u>
<u>U078</u>	<u>75-35-4</u>	<u>1,1-Dichloroethylene</u>
<u>U078</u>	<u>75-35-4</u>	<u>Ethene, 1,1-dichloro-</u>
<u>U079</u>	<u>156-60-5</u>	<u>1,2-Dichloroethylene</u>
<u>U079</u>	<u>156-60-5</u>	<u>Ethene, 1,2-dichloro-, (E)-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U080</u>	<u>75-09-2</u>	<u>Methane, dichloro-</u>
<u>U080</u>	<u>75-09-2</u>	<u>Methylene chloride</u>
<u>U081</u>	<u>120-83-2</u>	<u>2,4-Dichlorophenol</u>
<u>U081</u>	<u>120-83-2</u>	<u>Phenol, 2,4-dichloro-</u>
<u>U082</u>	<u>87-65-0</u>	<u>2,6-Dichlorophenol</u>
<u>U082</u>	<u>87-65-0</u>	<u>Phenol, 2,6-dichloro-</u>
<u>U083</u>	<u>78-87-5</u>	<u>Propane, 1,2-dichloro-</u>
<u>U083</u>	<u>78-87-5</u>	<u>Propylene dichloride</u>
<u>U084</u>	<u>542-75-6</u>	<u>1,3-Dichloropropene</u>
<u>U084</u>	<u>542-75-6</u>	<u>1-Propene, 1,3-dichloro-</u>
<u>U085</u>	<u>1464-53-5</u>	<u>2,2'-Bioxirane</u>
<u>U085</u>	<u>1464-53-5</u>	<u>1,2:3,4-Diepoxybutane (I,T)</u>
<u>U086</u>	<u>1615-80-1</u>	<u>N,N'-Diethylhydrazine</u>
<u>U086</u>	<u>1615-80-1</u>	<u>Hydrazine, 1,2-diethyl-</u>
<u>U087</u>	<u>3288-58-2</u>	<u>O,O-Diethyl S-methyl dithiophosphate</u>
<u>U087</u>	<u>3288-58-2</u>	<u>Phosphorodithioic acid, O,O-diethyl S-methyl ester</u>
<u>U088</u>	<u>84-66-2</u>	<u>1,2-Benzenedicarboxylic acid, diethyl ester</u>
<u>U088</u>	<u>84-66-2</u>	<u>Diethyl phthalate</u>
<u>U089</u>	<u>56-53-1</u>	<u>Diethylstilbesterol</u>
<u>U089</u>	<u>56-53-1</u>	<u>Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-</u>
<u>U090</u>	<u>94-58-6</u>	<u>1,3-Benzodioxole, 5-propyl-</u>
<u>U090</u>	<u>94-58-6</u>	<u>Dihydrosafrole</u>
<u>U091</u>	<u>119-90-4</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-</u>
<u>U091</u>	<u>119-90-4</u>	<u>3,3'-Dimethoxybenzidine</u>
<u>U092</u>	<u>124-40-3</u>	<u>Dimethylamine (I)</u>
<u>U092</u>	<u>124-40-3</u>	<u>Methanamine, -methyl- (I)</u>
<u>U093</u>	<u>60-11-7</u>	<u>Benzenamine, N,N-dimethyl-4-(phenylazo)-</u>
<u>U093</u>	<u>60-11-7</u>	<u>p-Dimethylaminoazobenzene</u>
<u>U094</u>	<u>57-97-6</u>	<u>Benz[a]anthracene, 7,12-dimethyl-</u>
<u>U094</u>	<u>57-97-6</u>	<u>7,12-Dimethylbenz[a]anthracene</u>
<u>U095</u>	<u>119-93-7</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-</u>
<u>U095</u>	<u>119-93-7</u>	<u>3,3'-Dimethylbenzidine</u>
<u>U096</u>	<u>80-15-9</u>	<u>alpha, alpha- Dimethylbenzylhydroperoxide (R)</u>
<u>U096</u>	<u>80-15-9</u>	<u>Hydroperoxide, 1-methyl-1-phenylethyl-(R)</u>
<u>U097</u>	<u>79-44-7</u>	<u>Carbamic chloride, dimethyl-</u>
<u>U097</u>	<u>79-44-7</u>	<u>Dimethylcarbamoyl chloride</u>
<u>U098</u>	<u>57-14-7</u>	<u>1,1-Dimethylhydrazine</u>
<u>U098</u>	<u>57-14-7</u>	<u>Hydrazine, 1,1-dimethyl-</u>
<u>U099</u>	<u>540-73-8</u>	<u>1,2-Dimethylhydrazine</u>
<u>U099</u>	<u>540-73-8</u>	<u>Hydrazine, 1,2-dimethyl-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U101</u>	<u>105-67-9</u>	<u>2,4-Dimethylphenol</u>
<u>U101</u>	<u>105-67-9</u>	<u>Phenol, 2,4-dimethyl-</u>
<u>U102</u>	<u>131-11-3</u>	<u>1,2-Benzenedicarboxylic acid, dimethyl ester</u>
<u>U102</u>	<u>131-11-3</u>	<u>Dimethyl phthalate</u>
<u>U103</u>	<u>77-78-1</u>	<u>Dimethyl sulfate</u>
<u>U103</u>	<u>77-78-1</u>	<u>Sulfuric acid, dimethyl ester</u>
<u>U105</u>	<u>121-14-2</u>	<u>Benzene, 1-methyl-2,4-dinitro-</u>
<u>U105</u>	<u>121-14-2</u>	<u>2,4-Dinitrotoluene</u>
<u>U106</u>	<u>606-20-2</u>	<u>Benzene, 2-methyl-1,3-dinitro-</u>
<u>U106</u>	<u>606-20-2</u>	<u>2,6-Dinitrotoluene</u>
<u>U107</u>	<u>117-84-0</u>	<u>1,2-Benzenedicarboxylic acid, dioctyl ester</u>
<u>U107</u>	<u>117-84-0</u>	<u>Di-n-octylphthalate</u>
<u>U108</u>	<u>123-91-1</u>	<u>1,4-Diethyleneoxide</u>
<u>U108</u>	<u>123-91-1</u>	<u>1,4-Dioxane</u>
<u>U109</u>	<u>122-66-7</u>	<u>1,2-Diphenylhydrazine</u>
<u>U109</u>	<u>122-66-7</u>	<u>Hydrazine, 1,2-diphenyl-</u>
<u>U110</u>	<u>142-84-7</u>	<u>Dipropylamine (l)</u>
<u>U110</u>	<u>142-84-7</u>	<u>1-Propanamine, N-propyl- (l)</u>
<u>U111</u>	<u>621-64-7</u>	<u>Di-n-propylnitrosamine</u>
<u>U111</u>	<u>621-64-7</u>	<u>1-Propanamine, N-nitroso-- propyl-</u>
<u>U112</u>	<u>141-78-6</u>	<u>Acetic acidethyl ester (l)</u>
<u>U112</u>	<u>141-78-6</u>	<u>Ethyl acetate (l)</u>
<u>U113</u>	<u>140-88-5</u>	<u>Ethyl acrylate (l)</u>
<u>U113</u>	<u>140-88-5</u>	<u>2-Propenoic acid, ethyl ester (l)</u>
<u>U114</u>	<u>111-54-6</u>	<u>Carbamodithioic acid, 1,2-ethanediybis-, salts & esters</u>
<u>U114</u>	<u>111-54-6</u>	<u>Ethylenebisdithiocarbamic acid, salts & esters</u>
<u>U115</u>	<u>75-21-8</u>	<u>Ethylene oxide (l,T)</u>
<u>U115</u>	<u>75-21-8</u>	<u>Oxirane (l,T)</u>
<u>U116</u>	<u>96-45-7</u>	<u>Ethylenethiourea</u>
<u>U116</u>	<u>96-45-7</u>	<u>2-Imidazolidinethione</u>
<u>U117</u>	<u>60-29-7</u>	<u>Ethane, 1,1'-oxybis- (l)</u>
<u>U117</u>	<u>60-29-7</u>	<u>Ethyl ether (l)</u>
<u>U118</u>	<u>97-63-2</u>	<u>Ethyl methacrylate</u>
<u>U118</u>	<u>97-63-2</u>	<u>2-Propenoic acid, 2-methyl-, ethyl ester</u>
<u>U119</u>	<u>62-50-0</u>	<u>Ethyl methanesulfonate</u>
<u>U119</u>	<u>62-50-0</u>	<u>Methanesulfonic acid, ethyl ester</u>
<u>U120</u>	<u>206-44-0</u>	<u>Fluoranthene</u>
<u>U121</u>	<u>75-69-4</u>	<u>Methane, trichlorofluoro-</u>
<u>U121</u>	<u>75-69-4</u>	<u>Trichloromonofluoromethane</u>
<u>U122</u>	<u>50-00-0</u>	<u>Formaldehyde</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U123</u>	<u>64-18-6</u>	<u>Formic acid (C,T)</u>
<u>U124</u>	<u>110-00-9</u>	<u>Furan (I)</u>
<u>U124</u>	<u>110-00-9</u>	<u>Furfuran (I)</u>
<u>U125</u>	<u>98-01-1</u>	<u>2-Furancarboxaldehyde (I)</u>
<u>U125</u>	<u>98-01-1</u>	<u>Furfural (I)</u>
<u>U126</u>	<u>765-34-4</u>	<u>Glycidylaldehyde</u>
<u>U126</u>	<u>765-34-4</u>	<u>Oxiranecarboxyaldehyde</u>
<u>U127</u>	<u>118-74-1</u>	<u>Benzene, hexachloro-</u>
<u>U127</u>	<u>118-74-1</u>	<u>Hexachlorobenzene</u>
<u>U128</u>	<u>87-68-3</u>	<u>1,3-Butadiene, 1,1,2,3,4,4-hexachloro-</u>
<u>U128</u>	<u>87-68-3</u>	<u>Hexachlorobutadiene</u>
<u>U129</u>	<u>58-89-9</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-</u>
<u>U129</u>	<u>58-89-9</u>	<u>Lindane</u>
<u>U130</u>	<u>77-47-4</u>	<u>1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-</u>
<u>U130</u>	<u>77-47-4</u>	<u>Hexachlorocyclopentadiene</u>
<u>U131</u>	<u>67-72-1</u>	<u>Ethane, hexachloro</u>
<u>U131</u>	<u>67-72-1</u>	<u>Hexachloroethane</u>
<u>U132</u>	<u>70-30-4</u>	<u>Hexachlorophene</u>
<u>U132</u>	<u>70-30-4</u>	<u>Phenol, 2,2'-methylenebis[3,4,6-trichloro-</u>
<u>U133</u>	<u>302-01-2</u>	<u>Hydrazine (R,T)</u>
<u>U134</u>	<u>7664-39-3</u>	<u>Hydrofluoric acid (C,T)</u>
<u>U134</u>	<u>7664-39-3</u>	<u>Hydrogen fluoride (C,T)</u>
<u>U135</u>	<u>7783-06-4</u>	<u>Hydrogen sulfide</u>
<u>U135</u>	<u>7783-06-4</u>	<u>Hydrogen sulfide H₂S</u>
<u>U136</u>	<u>75-60-5</u>	<u>Arsinic acid, dimethyl-</u>
<u>U136</u>	<u>75-60-5</u>	<u>Cacodylic acid</u>
<u>U137</u>	<u>193-39-5</u>	<u>Indeno[1,2,3-cd]pyrene</u>
<u>U138</u>	<u>74-88-4</u>	<u>Methane, iodo-</u>
<u>U138</u>	<u>74-88-4</u>	<u>Methyl iodide</u>
<u>U140</u>	<u>78-83-1</u>	<u>Isobutyl alcohol (I,T)</u>
<u>U140</u>	<u>78-83-1</u>	<u>1-Propanol, 2-methyl- (I,T)</u>
<u>U141</u>	<u>120-58-1</u>	<u>1,3-Benzodioxole, 5-(1-propenyl)-</u>
<u>U141</u>	<u>120-58-1</u>	<u>Isosafrole</u>
<u>U142</u>	<u>143-50-0</u>	<u>Kepone</u>
<u>U142</u>	<u>143-50-0</u>	<u>1,3,4-Metheno-2H- cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6- decachlorooctahydro-</u>
<u>U143</u>	<u>303-34-4</u>	<u>2-Butenoic acid,2-methyl-, 7-[[2,3-dihydroxy-2-(1- methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-ylester,[1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-</u>
<u>U143</u>	<u>303-34-4</u>	<u>Lasiocarpine</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
U144	<u>301-04-2</u>	<u>Acetic acid, lead(2+) salt</u>
U144	<u>301-04-2</u>	<u>Lead acetate</u>
U145	<u>7446-27-7</u>	<u>Lead phosphate</u>
U145	<u>7446-27-7</u>	<u>Phosphoric acid, lead (2+) salt (2:3)</u>
U146	<u>1335-32-6</u>	<u>Lead, bis(acetato-O)tetrahydroxytri-</u>
U146	<u>1335-32-6</u>	<u>Lead subacetate</u>
U147	<u>108-31-6</u>	<u>2,5-Furandione</u>
U147	<u>108-31-6</u>	<u>Maleic anhydride</u>
U148	<u>123-33-1</u>	<u>Maleic hydrazide</u>
U148	<u>123-33-1</u>	<u>3,6-Pyridazinedione, 1,2-dihydro-</u>
U149	<u>109-77-3</u>	<u>Malononitrile</u>
U149	<u>109-77-3</u>	<u>Propanedinitrile</u>
U150	<u>148-82-3</u>	<u>Melphalan</u>
U150	<u>148-82-3</u>	<u>L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-</u>
U151	<u>7439-97-6</u>	<u>Mercury</u>
U152	<u>126-98-7</u>	<u>Methacrylonitrile (I,T)</u>
U152	<u>126-98-7</u>	<u>2-Propenenitrile, 2-methyl- (I,T)</u>
U153	<u>74-93-1</u>	<u>Methanethiol (I,T)</u>
U153	<u>74-93-1</u>	<u>Thiomethanol (I,T)</u>
U154	<u>67-56-1</u>	<u>Methanol (I)</u>
U154	<u>67-56-1</u>	<u>Methyl alcohol (I)</u>
U155	<u>91-80-5</u>	<u>1,2-Ethanediamine, N,' dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-</u>
U155	<u>91-80-5</u>	<u>Methapyrilene</u>
U156	<u>79-22-1</u>	<u>Carbonochloridic acid, methyl ester (I,T)</u>
U156	<u>79-22-1</u>	<u>Methyl chlorocarbonate (I,T)</u>
U157	<u>56-49-5</u>	<u>Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-</u>
U157	<u>56-49-5</u>	<u>3-Methylcholanthrene</u>
U158	<u>101-14-4</u>	<u>Benzenamine, 4,4'-methylenebis[2-chloro-</u>
U158	<u>101-14-4</u>	<u>4,4'-Methylenebis(2-chloroaniline)</u>
U159	<u>78-93-3</u>	<u>2-Butanone (I,T)</u>
U159	<u>78-93-3</u>	<u>Methylethylketone(MEK) (I,T)</u>
U160	<u>1338-23-4</u>	<u>2-Butanone, peroxide (R,T)</u>
U160	<u>1338-23-4</u>	<u>Methyl ethyl ketone peroxide (R,T)</u>
U161	<u>108-10-1</u>	<u>Methyl isobutyl ketone (I)</u>
U161	<u>108-10-1</u>	<u>4-Methyl-2-pentanone (I)</u>
U161	<u>108-10-1</u>	<u>Pentanol, 4-methyl-</u>
U162	<u>80-62-6</u>	<u>Methyl methacrylate (I,T)</u>
U162	<u>80-62-6</u>	<u>2-Propenoic acid, 2-methyl-, methyl ester (I,T)</u>
U163	<u>70-25-7</u>	<u>Guanidine, -methyl-N'-nitro-- nitroso-</u>
U163	<u>70-25-7</u>	<u>MNNG</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U164</u>	<u>56-04-2</u>	<u>Methylthiouracil</u>
<u>U164</u>	<u>56-04-2</u>	<u>4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-</u>
<u>U165</u>	<u>91-20-3</u>	<u>Naphthalene</u>
<u>U166</u>	<u>130-15-4</u>	<u>1,4-Naphthalenedione</u>
<u>U166</u>	<u>130-15-4</u>	<u>1,4-Naphthoquinone</u>
<u>U167</u>	<u>134-32-7</u>	<u>1-Naphthalenamine</u>
<u>U167</u>	<u>134-32-7</u>	<u>alpha-Naphthylamine</u>
<u>U168</u>	<u>91-59-8</u>	<u>2-Naphthalenamine</u>
<u>U168</u>	<u>91-59-8</u>	<u>beta-Naphthylamine</u>
<u>U169</u>	<u>98-95-3</u>	<u>Benzene, nitro-</u>
<u>U169</u>	<u>98-95-3</u>	<u>Nitrobenzene (I,T)</u>
<u>U170</u>	<u>100-02-7</u>	<u>p-Nitrophenol</u>
<u>U170</u>	<u>100-02-7</u>	<u>Phenol, 4-nitro-</u>
<u>U171</u>	<u>79-46-9</u>	<u>2-Nitropropane (I,T)</u>
<u>U171</u>	<u>79-46-9</u>	<u>Propane, 2-nitro- (I,T)</u>
<u>U172</u>	<u>924-16-3</u>	<u>1-Butanamine, N-butyl--nitroso-</u>
<u>U172</u>	<u>924-16-3</u>	<u>N-Nitrosodi-n-butylamine</u>
<u>U173</u>	<u>1116-54-7</u>	<u>Ethanol, 2,2'-(nitrosoimino)bis-</u>
<u>U173</u>	<u>1116-54-7</u>	<u>N-Nitrosodiethanolamine</u>
<u>U174</u>	<u>55-18-5</u>	<u>Ethanamine, -ethyl-N-nitroso-</u>
<u>U174</u>	<u>55-18-5</u>	<u>N-Nitrosodiethylamine</u>
<u>U176</u>	<u>759-73-9</u>	<u>N-Nitroso-N-ethylurea</u>
<u>U176</u>	<u>759-73-9</u>	<u>Urea, N-ethyl-N-nitroso-</u>
<u>U177</u>	<u>684-93-5</u>	<u>N-Nitroso-N-methylurea</u>
<u>U177</u>	<u>684-93-5</u>	<u>Urea, N-methyl-N-nitroso-</u>
<u>U178</u>	<u>615-53-2</u>	<u>Carbamic acid, methylnitroso-, ethyl ester</u>
<u>U178</u>	<u>615-53-2</u>	<u>N-Nitroso-N-methylurethane</u>
<u>U179</u>	<u>100-75-4</u>	<u>N-Nitrosopiperidine</u>
<u>U179</u>	<u>100-75-4</u>	<u>Piperidine, 1-nitroso-</u>
<u>U180</u>	<u>930-55-2</u>	<u>N-Nitrosopyrrolidine</u>
<u>U180</u>	<u>930-55-2</u>	<u>Pyrrolidine, 1-nitroso-</u>
<u>U181</u>	<u>99-55-8</u>	<u>Benzenamine, 2-methyl-5-nitro-</u>
<u>U181</u>	<u>99-55-8</u>	<u>5-Nitro-o-toluidine</u>
<u>U182</u>	<u>123-63-7</u>	<u>1,3,5-Trioxane, 2,4,6-trimethyl-</u>
<u>U182</u>	<u>123-63-7</u>	<u>Paraldehyde</u>
<u>U183</u>	<u>608-93-5</u>	<u>Benzene, pentachloro-</u>
<u>U183</u>	<u>608-93-5</u>	<u>Pentachlorobenzene</u>
<u>U184</u>	<u>76-01-7</u>	<u>Ethane, pentachloro-</u>
<u>U184</u>	<u>76-01-7</u>	<u>Pentachloroethane</u>
<u>U185</u>	<u>82-68-8</u>	<u>Benzene, pentachloronitro-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U185</u>	<u>82-68-8</u>	<u>Pentachloronitrobenzene(PCNB)</u>
<u>U186</u>	<u>504-60-9</u>	<u>1-Methylbutadiene (I)</u>
<u>U186</u>	<u>504-60-9</u>	<u>1,3-Pentadiene (I)</u>
<u>U187</u>	<u>62-44-2</u>	<u>Acetamide, -(4-ethoxyphenyl)-</u>
<u>U187</u>	<u>62-44-2</u>	<u>Phenacetin</u>
<u>U188</u>	<u>108-95-2</u>	<u>Phenol</u>
<u>U189</u>	<u>1314-80-3</u>	<u>Phosphorus sulfide (R)</u>
<u>U189</u>	<u>1314-80-3</u>	<u>Sulfur phosphide (R)</u>
<u>U190</u>	<u>85-44-9</u>	<u>1,3-Isobenzofurandione</u>
<u>U190</u>	<u>85-44-9</u>	<u>Phthalic anhydride</u>
<u>U191</u>	<u>109-06-8</u>	<u>2-Picoline</u>
<u>U191</u>	<u>109-06-8</u>	<u>Pyridine, 2-methyl-</u>
<u>U192</u>	<u>23950-58-5</u>	<u>Benzamide, 3,5-dichloro-- (1,1-dimethyl-2-propynyl)-</u>
<u>U192</u>	<u>23950-58-5</u>	<u>Pronamide</u>
<u>U193</u>	<u>1120-71-4</u>	<u>1,2-Oxathiolane, 2,2-dioxide</u>
<u>U193</u>	<u>1120-71-4</u>	<u>1,3-Propane sultone</u>
<u>U194</u>	<u>107-10-8</u>	<u>1-Propanamine (I,T)</u>
<u>U194</u>	<u>107-10-8</u>	<u>n-Propylamine (I,T)</u>
<u>U196</u>	<u>110-86-1</u>	<u>Pyridine</u>
<u>U197</u>	<u>106-51-4</u>	<u>p-Benzoquinone</u>
<u>U197</u>	<u>106-51-4</u>	<u>2,5-Cyclohexadiene-1,4-dione</u>
<u>U200</u>	<u>50-55-5</u>	<u>Reserpine</u>
<u>U200</u>	<u>50-55-5</u>	<u>Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester,(3beta,16beta,17alpha,18beta,20alpha)-</u>
<u>U201</u>	<u>108-46-3</u>	<u>1,3-Benzenediol</u>
<u>U201</u>	<u>108-46-3</u>	<u>Resorcinol</u>
<u>U203</u>	<u>94-59-7</u>	<u>1,3-Benzodioxole, 5-(2-propenyl)-</u>
<u>U203</u>	<u>94-59-7</u>	<u>Safrole</u>
<u>U204</u>	<u>7783-00-8</u>	<u>Selenious acid</u>
<u>U204</u>	<u>7783-00-8</u>	<u>Selenium dioxide</u>
<u>U205</u>	<u>7488-56-4</u>	<u>Selenium sulfide</u>
<u>U205</u>	<u>7488-56-4</u>	<u>Selenium sulfide SeS₂ (R,T)</u>
<u>U206</u>	<u>18883-66-4</u>	<u>Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-</u>
<u>U206</u>	<u>18883-66-4</u>	<u>D-Glucose, 2-deoxy-2- [[(methylnitrosoamino)-carbonyl]amino]-</u>
<u>U206</u>	<u>18883-66-4</u>	<u>Streptozotocin</u>
<u>U207</u>	<u>95-94-3</u>	<u>Benzene, 1,2,4,5-tetrachloro-</u>
<u>U207</u>	<u>95-94-3</u>	<u>1,2,4,5-Tetrachlorobenzene</u>
<u>U208</u>	<u>630-20-6</u>	<u>Ethane, 1,1,1,2-tetrachloro-</u>
<u>U208</u>	<u>630-20-6</u>	<u>1,1,1,2-Tetrachloroethane</u>
<u>U209</u>	<u>79-34-5</u>	<u>Ethane, 1,1,2,2-tetrachloro-</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U209</u>	<u>79-34-5</u>	<u>1,1,2,2-Tetrachloroethane</u>
<u>U210</u>	<u>127-18-4</u>	<u>Ethene, tetrachloro-</u>
<u>U210</u>	<u>127-18-4</u>	<u>Tetrachloroethylene</u>
<u>U211</u>	<u>56-23-5</u>	<u>Carbon tetrachloride</u>
<u>U211</u>	<u>56-23-5</u>	<u>Methane, tetrachloro-</u>
<u>U213</u>	<u>109-99-9</u>	<u>Furan, tetrahydro- (I)</u>
<u>U213</u>	<u>109-99-9</u>	<u>Tetrahydrofuran (I)</u>
<u>U214</u>	<u>563-68-8</u>	<u>Acetic acid, thallium(1+) salt</u>
<u>U214</u>	<u>563-68-8</u>	<u>Thallium (I)acetate</u>
<u>U215</u>	<u>6533-73-9</u>	<u>Carbonic acid, dithallium(1+) salt</u>
<u>U215</u>	<u>6533-73-9</u>	<u>Thallium (I) carbonate</u>
<u>U216</u>	<u>7791-12-0</u>	<u>Thallium (I) chloride</u>
<u>U216</u>	<u>7791-12-0</u>	<u>Thallium chloride TICl</u>
<u>U217</u>	<u>10102-45-1</u>	<u>Nitric acid, thallium(1+) salt</u>
<u>U217</u>	<u>10102-45-1</u>	<u>Thallium (I) nitrate</u>
<u>U218</u>	<u>62-55-5</u>	<u>Ethanethioamide</u>
<u>U218</u>	<u>62-55-5</u>	<u>Thioacetamide</u>
<u>U219</u>	<u>62-56-6</u>	<u>Thiourea</u>
<u>U220</u>	<u>108-88-3</u>	<u>Benzene, methyl-</u>
<u>U220</u>	<u>108-88-3</u>	<u>Toluene</u>
<u>U221</u>	<u>25376-45-8</u>	<u>Benzenediamine, ar-methyl-</u>
<u>U221</u>	<u>25376-45-8</u>	<u>Toluenediamine</u>
<u>U222</u>	<u>636-21-5</u>	<u>Benzenamine, 2-methyl-, hydrochloride</u>
<u>U222</u>	<u>636-21-5</u>	<u>o-Toluidinehydrochloride</u>
<u>U223</u>	<u>26471-62-5</u>	<u>Benzene, 1,3-diisocyanatomethyl- (R,T)</u>
<u>U223</u>	<u>26471-62-5</u>	<u>Toluene diisocyanate (R,T)</u>
<u>U225</u>	<u>75-25-2</u>	<u>Bromoform</u>
<u>U225</u>	<u>75-25-2</u>	<u>Methane, tribromo-</u>
<u>U226</u>	<u>71-55-6</u>	<u>Ethane, 1,1,1-trichloro-</u>
<u>U226</u>	<u>71-55-6</u>	<u>Methyl chloroform</u>
<u>U226</u>	<u>71-55-6</u>	<u>1,1,1-Trichloroethane</u>
<u>U227</u>	<u>79-00-5</u>	<u>Ethane, 1,1,2-trichloro-</u>
<u>U227</u>	<u>79-00-5</u>	<u>1,1,2-Trichloroethane</u>
<u>U228</u>	<u>79-01-6</u>	<u>Ethene ,trichloro-</u>
<u>U228</u>	<u>79-01-6</u>	<u>Trichloroethylene</u>
<u>U234</u>	<u>99-35-4</u>	<u>Benzene, 1,3,5-trinitro-</u>
<u>U234</u>	<u>99-35-4</u>	<u>1,3,5-Trinitrobenzene (R,T)</u>
<u>U235</u>	<u>126-72-7</u>	<u>1-Propanol, 2,3-dibromo-,phosphate(3:1)</u>
<u>U235</u>	<u>126-72-7</u>	<u>Tris(2,3-dibromopropyl) phosphate</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
U236	<u>72-57-1</u>	<u>2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt</u>
U236	<u>72-57-1</u>	<u>Trypan blue</u>
U237	<u>66-75-1</u>	<u>2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-</u>
U237	<u>66-75-1</u>	<u>Uracil mustard</u>
U238	<u>51-79-6</u>	<u>Carbamic acid, ethyl ester</u>
U238	<u>51-79-6</u>	<u>Ethyl carbamate (urethane)</u>
U239	<u>1330-20-7</u>	<u>Benzene, dimethyl- (l,t)</u>
U239	<u>1330-20-7</u>	<u>Xylene (l)</u>
U240	<u>194-75-7</u>	<u>Acetic acid, (2,4-dichlorophenoxy)-, salts & esters</u>
U240	<u>194-75-7</u>	<u>2,4-D, salts & esters</u>
U243	<u>1888-71-7</u>	<u>Hexachloropropene</u>
U243	<u>1888-71-7</u>	<u>1-Propene, 1,1,2,3,3,3-hexachloro-</u>
U244	<u>137-26-8</u>	<u>Thioperoxydicarbonic diamide[(H₂N)C(S)]₂S₂, tetramethyl-</u>
U244	<u>137-26-8</u>	<u>Thiram</u>
U246	<u>506-68-3</u>	<u>Cyanogen bromide (CN)Br</u>
U247	<u>72-43-5</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-</u>
U247	<u>72-43-5</u>	<u>Methoxychlor</u>
U248	<u>181-81-2</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less</u>
U248	<u>181-81-2</u>	<u>Warfarin, & salts, when present at concentrations of 0.3% or less</u>
U249	<u>1314-84-7</u>	<u>Zinc phosphide Zn₃P₂, when present at concentrations of 10% or less</u>
U271	<u>17804-35-2</u>	<u>Benomyl</u>
U271	<u>17804-35-2</u>	<u>Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester</u>
U278	<u>22781-23-3</u>	<u>Bendiocarb</u>
U278	<u>22781-23-3</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate</u>
U279	<u>63-25-2</u>	<u>Carbaryl</u>
U279	<u>63-25-2</u>	<u>1-Naphthalenol, methylcarbamate</u>
U280	<u>101-27-9</u>	<u>Barban</u>
U280	<u>101-27-9</u>	<u>Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester</u>
U328	<u>95-53-4</u>	<u>Benzenamine, 2-methyl-</u>
U328	<u>95-53-4</u>	<u>o-Toluidine</u>
U353	<u>106-49-0</u>	<u>Benzenamine, 4-methyl-</u>
U353	<u>106-49-0</u>	<u>p-Toluidine</u>
U359	<u>110-80-5</u>	<u>Ethanol, 2-ethoxy-</u>
U359	<u>110-80-5</u>	<u>Ethylene glycol monoethyl ether</u>
U364	<u>22961-82-6</u>	<u>Bendiocarb phenol</u>
U364	<u>22961-82-6</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-,</u>
U367	<u>1563-38-8</u>	<u>7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-</u>
U367	<u>1563-38-8</u>	<u>Carbofuran phenol</u>

<u>Hazardous Waste No.</u>	<u>Chemical Abstracts No.</u>	<u>Substance</u>
<u>U372</u>	<u>10605-21-7</u>	<u>Carbamic acid, 1H-benzimidazol-2-yl, methyl ester</u>
<u>U372</u>	<u>10605-21-7</u>	<u>Carbendazim</u>
<u>U373</u>	<u>122-42-9</u>	<u>Carbamic acid, phenyl-, 1-methylethyl ester</u>
<u>U373</u>	<u>122-42-9</u>	<u>Propham</u>
<u>U387</u>	<u>52888-80-9</u>	<u>Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester</u>
<u>U387</u>	<u>52888-80-9</u>	<u>Prosulfocarb</u>
<u>U389</u>	<u>2303-17-5</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester</u>
<u>U389</u>	<u>2303-17-5</u>	<u>Triallate</u>
<u>U394</u>	<u>30558-43-1</u>	<u>A2213</u>
<u>U394</u>	<u>30558-43-1</u>	<u>Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester</u>
<u>U395</u>	<u>5952-26-1</u>	<u>Diethylene glycol, dicarbamate</u>
<u>U395</u>	<u>5952-26-1</u>	<u>Ethanol, 2,2'-oxybis-, dicarbamate</u>
<u>U404</u>	<u>121-44-8</u>	<u>Ethanamine, N,N-diethyl-</u>
<u>U404</u>	<u>121-44-8</u>	<u>Triethylamine</u>
<u>U409</u>	<u>23564-05-8</u>	<u>Carbamic acid, [1,2-phenylenebis (Iminocarbonothioyl)]bis-, dimethyl ester</u>
<u>U409</u>	<u>23564-05-8</u>	<u>Thiophanate-methyl</u>
<u>U410</u>	<u>59669-26-0</u>	<u>Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester</u>
<u>U410</u>	<u>59669-26-0</u>	<u>Thiodicarb</u>
<u>U411</u>	<u>114-26-1</u>	<u>Phenol, 2-(1-methylethoxy)-, methylcarbamate</u>
<u>U411</u>	<u>114-26-1</u>	<u>Propoxur</u>
<u>See F027</u>	<u>93-76-5</u>	<u>Acetic acid, (2,4,5-trichlorophenoxy)-</u>
<u>See F027</u>	<u>87-86-5</u>	<u>Pentachlorophenol</u>
<u>See F027</u>	<u>87-86-5</u>	<u>Phenol, pentachloro-</u>
<u>See F027</u>	<u>58-90-2</u>	<u>Phenol, 2,3,4,6-tetrachloro-</u>
<u>See F027</u>	<u>95-95-4</u>	<u>Phenol, 2,4,5-trichloro-</u>
<u>See F027</u>	<u>88-06-2</u>	<u>Phenol, 2,4,6-trichloro-</u>
<u>See F027</u>	<u>93-72-1</u>	<u>Propanoic acid, 2-(2,4,5-trichlorophenoxy)-</u>
<u>See F027</u>	<u>93-72-1</u>	<u>Silvex (2,4,5-TP)</u>
<u>See F027</u>	<u>93-76-5</u>	<u>2,4,5-T</u>
<u>See F027</u>	<u>58-90-2</u>	<u>2,3,4,6-Tetrachlorophenol</u>
<u>See F027</u>	<u>95-95-4</u>	<u>2,4,5-Trichlorophenol</u>
<u>See F027</u>	<u>88-06-2</u>	<u>2,4,6-Trichlorophenol</u>

¹CAS number given for parent compound only.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-19. Deletion of certain hazardous waste codes following equipment cleaning and replacement.

1. Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has

met all the requirements of subsections 2 and 3. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

2. Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, forklifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

a. Generators shall do one of the following:

- (1) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this section;
- (2) Prepare and follow an equipment replacement plan and replace equipment in accordance with this section; or
- (3) Document cleaning and replacement in accordance with this section, carried out after termination of use of chlorophenolic preservatives.

b. Cleaning requirements.

- (1) Prepare and sign a written equipment cleaning plan that describes:

- (a) The equipment to be cleaned;
- (b) How the equipment will be cleaned;
- (c) The solvent to be used in cleaning;
- (d) How solvent rinses will be tested; and
- (e) How cleaning residues will be disposed.

- (2) Equipment must be cleaned as follows:

- (a) Remove all visible residues from process equipment;
- (b) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

- (3) Analytical requirements.

- (a) Rinses must be tested by using an appropriate method.
- (b) "Not detected" means at or below the following lower method calibration limits (MCLs). The 2,3,7,8-TCDD-based MCL—0.01 parts per trillion, sample weight of 1000 grams IS spiking level of 1 parts per trillion, final extraction volume of 10–50 micro liter. For other congeners, multiply the values by 1 for TCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF/HpCDD/HpCDF, and by 5 for OCDD/OCDF.

- (4) The generator must manage all residues from the cleaning process as F032 waste.

c. Replacement requirements.

- (1) Prepare and sign a written equipment replacement plan that describes:
 - (a) The equipment to be replaced;
 - (b) How the equipment will be replaced; and
 - (c) How the equipment will be disposed.
 - (2) The generator must manage the discarded equipment as F032 waste.
 - d. Documentation requirements.
 - (1) Document that previous equipment cleaning or replacement, or both, was performed in accordance with this section and occurred after cessation of use of chlorophenolic preservatives.
 - (2) [Reserved]
3. The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:
- a. The name and address of the facility;
 - b. Formulations previously used and the date on which their use ceased in each process at the plant;
 - c. Formulations currently used in each process at the plant;
 - d. The equipment cleaning or replacement plan;
 - e. The name and address of any persons who conducted the cleaning and replacement;
 - f. The dates on which cleaning and replacement were accomplished;
 - g. The dates of sampling and testing;
 - h. A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;
 - i. A description of the tests performed, the date the tests were performed, and the results of the tests;
 - j. The name and model numbers of the instruments used in performing the tests;
 - k. QA/QC documentation; and
 - l. The following statement signed by the generator or the generator's authorized representative: I certify under penalty of law that all process equipment required to be cleaned or replaced under section 33.1-24-02-19 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-20. [Reserved]

33.1-24-02-21. [Reserved]

33.1-24-02-22. [Reserved]

33.1-24-02-23. [Reserved].

33.1-24-02-24. [Reserved].

33.1-24-02-25. Conditional exclusion for used, broken cathode ray tubes and processed cathode ray tube glass undergoing recycling.

Used, broken cathode ray tubes are not solid wastes if they meet the following conditions:

1. Prior to processing: These materials are not solid wastes if they are destined for recycling and if they meet the following requirements:

a. Storage. The broken cathode ray tubes must be either:

(1) Stored in a building with a roof, floor, and walls; or

(2) Placed in a container (for example, a package or a vehicle) that is constructed, filled, and closed to minimize releases to the environment of cathode ray tube glass (including fine solid materials).

b. Labeling. Each container in which the used, broken cathode ray tube is contained must be labeled or marked clearly with one of the following phrases: "Used cathode ray tubes-contains leaded glass" or "Leaded glass from televisions or computers." The container must also be labeled: "Do not mix with other glass materials".

c. Transportation. The used, broken cathode ray tubes must be transported in a container meeting the requirements of paragraph 2 of subdivision a and subdivision b.

d. Speculative accumulation and use constituting disposal. The used, broken cathode ray tubes are subject to the limitations on speculative accumulation as defined in subdivision h of subsection 3 of section 33.1-24-02-01. If they are used in a manner constituting disposal, they must comply with the applicable requirements of sections 33.1-24-05-201 through 33.1-24-05-209 instead of the requirements of this section.

e. Exports. In addition to the applicable conditions specified in subdivisions a through d, exporters of used, broken cathode ray tubes must comply with the following requirements:

(1) Notify the environmental protection agency and the department of an intended export before the cathode ray tubes are scheduled to leave the United States. A complete notification should be submitted sixty days before the initial shipment is intended to be shipped offsite. This notification may cover export activities extending over a twelve month or lesser period. The notification must be in writing, signed by the exporter, and include the following information:

(a) Name, mailing address, telephone number and identification number (if applicable) of the exporter of the cathode ray tubes.

(b) The estimated frequency or rate at which the cathode ray tubes are to be exported and the period of time over which the cathode ray tubes are to be exported.

(c) The estimated total quantity of cathode ray tubes specified in kilograms.

(d) All points of entry to and departure from each foreign country through which the cathode ray tubes will pass.

(e) A description of the means by which each shipment of the cathode ray tubes will be transported (for example, mode of transportation vehicle (air, highway, rail, water), types of containers (drums, boxes, tanks)).

(f) The name and address of the recycler or recyclers and the estimated quantity of used cathode ray tubes to be sent to each facility, as well as the names of any alternate recyclers.

(g) A description of the manner in which the cathode ray tubes will be recycled in the foreign country that will be receiving the cathode ray tubes.

(h) The name of any transit country through which the cathode ray tubes will be sent and a description of the approximate length of time the cathode ray tubes will remain in such country and the nature of their handling while there.

(2) Notifications submitted by mail should be sent to the department and to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, Ariel Rios Building, Room 6144, 1200 Pennsylvania Avenue, NW, Washington, D.C. In both cases, the following must be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export Cathode Ray Tubes".

(3) Upon request by the department or the environmental protection agency, the exporter shall furnish to the department and the environmental protection agency any additional information which a receiving country requests in order to respond to a notification.

(4) The environmental protection agency will provide a complete notification to the receiving country and any transit countries. A notification is complete when the environmental protection agency receives a notification which the environmental protection agency determines satisfies the requirements of paragraph 1. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph 1, the environmental protection agency may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(5) The export of cathode ray tubes is prohibited unless the receiving country consents to the intended export. When the receiving country consents in writing to the receipt of the cathode ray tubes, the environmental protection agency will forward an acknowledgment of consent to export cathode ray tubes to the exporter. Where the receiving country objects to receipt of the cathode ray tubes or withdraws a prior consent, the environmental protection agency will notify the exporter in writing. The environmental protection agency will also notify the exporter of any responses from transit countries.

(6) When the conditions specified on the original notification change, the exporter must provide the department and the environmental protection agency with a written

renotification of the change, except for changes to the telephone number in subparagraph a of paragraph 1 and decreases in the quantity indicated pursuant to subparagraph c of paragraph 1. The shipment cannot take place until consent of the receiving country to the changes has been obtained (except for changes to information about points of entry and departure and transit countries pursuant to subparagraphs d and h of paragraph 1) and the exporter of cathode ray tubes receives from the environmental protection agency a copy of the acknowledgment of consent to export cathode ray tubes reflecting the receiving country's consent to the changes.

(7) A copy of the acknowledgment of consent to export cathode ray tubes must accompany the shipment of cathode ray tubes. The shipment must conform to the terms of the acknowledgment.

(8) If a shipment of cathode ray tubes cannot be delivered for any reason to the recycler or the alternate recycler, the exporter of cathode ray tubes must renotify the department and the environmental protection agency of a change in the conditions of the original notification to allow shipment to a new recycler in accordance with paragraph 6 and obtain another acknowledgment of consent to export cathode ray tubes.

(9) Exporters must keep copies of notifications and acknowledgments of consent to export cathode ray tubes for a period of three years following receipt of the acknowledgment.

(10) Cathode ray tube exporters must file with the environmental protection agency and the department no later than March 1 of each year, an annual report summarizing the quantities (in kilograms), frequency of shipment, and ultimate destinations (for example, the facility or facilities where the recycling occurs) of all used cathode ray tubes exported during the previous calendar year. Such reports must also include the following:

(a) The name, environmental protection agency identification number (if applicable), and mailing and site address of the exporter;

(b) The calendar year covered by the report;

(c) A certification signed by the cathode ray tube exporter which states: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment".

(11) Annual reports must be submitted to the department and the office specified in paragraph 2. Exporters shall keep copies of each annual report for a period of at least three years from the due date of the report.

2. Requirements for used cathode ray tube processing: Used, broken cathode ray tubes undergoing cathode ray tube processing as defined in section 33.1-24-01-04 are not solid wastes if they meet the following requirements:

a. Storage. Used, broken cathode ray tubes undergoing processing are subject to the requirement of subdivision d of subsection 1.

b. Processing.

(1) All activities specified in subdivisions b and c of the definition of "cathode ray tube processing" in section 33.1-24-01-04 must be performed within a building with a roof, floor, and walls; and

(2) No activities may be performed which use temperatures high enough to volatilize lead from cathode ray tubes.

3. Processed cathode ray tube glass sent to cathode ray tube glass making or lead smelting: Glass from used cathode ray tubes which is destined for recycling at a cathode ray tube glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated as defined in subdivision h of subsection 3 of section 33.1-24-02-01.

4. Use constituting disposal: Glass from used cathode ray tubes which is used in a manner constituting disposal must comply with the requirements of sections 33.1-24-05-201 through 33.1-24-05-209 instead of the requirements of this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-26. Conditional exclusion for used, intact cathode ray tubes exported for recycling.

Used, intact cathode ray tubes exported for recycling are not solid wastes if they meet the notice and consent conditions of subdivision e of subsection 1 of section 33.1-24-02-25, and if they are not speculatively accumulated as defined in subdivision h of subsection 3 of section 33.1-24-02-01.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-27. Notification and recordkeeping for used, intact cathode ray tubes exported for reuse.

1. Cathode ray tube exporters who export used, intact cathode ray tubes for reuse shall send a notification to the department and the environmental protection agency. This notification may cover export activities extending over a twelve month or lesser period.

a. The notification must be in writing, signed by the exporter, and include the following information:

(1) Name, mailing address, telephone number, and identification number (if applicable) of the exporter of the used, intact cathode ray tubes;

(2) The estimated frequency or rate at which the used, intact cathode ray tubes are to be exported for reuse and the period of time over which cathode ray tubes are to be exported;

(3) The estimated total quantity of used, intact cathode ray tubes specified in kilograms;

(4) All points of entry to and departure from each transit country through which the used, intact cathode ray tubes will pass, a description of the approximate length of time the used, intact cathode ray tubes will remain in such country, and the nature of cathode ray tubes handling while there;

- (5) A description of the means by which each shipment of the used, intact cathode ray tubes will be transported (for example, mode of transportation vehicle (air, highway, rail, water), type of container (for example, drums, boxes, tanks));
- (6) The name and address of the ultimate destination facility or facilities where the used, intact cathode ray tubes will be reused, refurbished, distributed, or sold for reuse and the estimated quantity of used, intact cathode ray tubes to be sent to each facility, as well as the name of any alternate destination facility or facilities;
- (7) A description of the manner in which the used, intact cathode ray tubes will be reused (including reuse after refurbishment) in the foreign country that will be receiving the used, intact cathode ray tubes; and
- (8) A certification signed by the cathode ray tube exporter which states:

"I certify under penalty of law that the cathode ray tubes described in this notice are intact and fully functioning or capable of being functional after refurbishment and that the used cathode ray tubes will be reused or refurbished and reused. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment".

- b. Notifications submitted by mail should be sent to the department and to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, William Jefferson Clinton Building, Room 6144, 1200 Pennsylvania Ave. NW., Washington, DC 20004. In both cases, the following must be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export Cathode Ray Tubes".

2. Cathode ray tube exporters of used, intact cathode ray tubes sent for reuse shall keep copies of normal business records, such as contracts, demonstrating that each shipment of exported used, intact cathode ray tubes will be reused. This documentation must be retained for a period of at least three years from the date the cathode ray tubes were exported. If the documents are written in a language other than English, cathode ray tube exporters of used, intact cathode ray tubes sent for reuse shall provide both the original, non-English version of the normal business records as well as a third-party translation of the normal business records into English within thirty days upon request by the department or the environmental protection agency.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-28. [Reserved].

33.1-24-02-29. [Reserved].

33.1-24-02-30. [Reserved].

33.1-24-02-31. [Reserved].

33.1-24-02-32. [Reserved].

33.1-24-02-33. Applicability of financial requirements for management of excluded hazardous secondary materials.

1. The requirements of sections 33.1-24-02-33 through 33.1-24-02-42 apply to owners or operators of reclamation and intermediate facilities managing hazardous secondary materials excluded under subdivision y of subsection 1 of section 33.1-24-02-04, except as provided otherwise in this section.
2. Federal agencies and agencies of the government of the state of North Dakota are exempt from the financial assurance requirements of sections 33.1-24-02-33 through 33.1-24-02-42.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-34. Definitions of terms as used in sections 33.1-24-02-33 through 33.1-24-02-42.

The terms defined in subsections 4, 6, 7, and 8 of section 33.1-24-05-75 have the same meaning in sections 33.1-24-02-33 through 33.1-24-02-42.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-35. Cost estimate for closure.

1. The cost estimates for closure.
 - a. The owner or operator shall have a detailed written estimate, in current dollars, of the cost of disposing of any hazardous secondary material as listed or characteristic hazardous waste, and the potential cost of closing the facility as a treatment, storage, and disposal facility.
 - (1) The estimate must equal the cost of conducting the activities described in subsection 1 at the point when the extent and manner of the facility's operation would make these activities the most expensive; and
 - (2) The cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct these activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in subsection 4 of section 33.1-24-05-75.) The owner or operator may use costs for onsite disposal in accordance with applicable requirements if the owner or operator can demonstrate that onsite disposal capacity will exist at all times over the life of the facility.

(3) The cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous secondary materials, or hazardous or nonhazardous wastes, facility structures or equipment, land, or other assets associated with the facility.

(4) The owner or operator may not incorporate a zero cost for hazardous secondary materials, or hazardous or nonhazardous wastes that might have economic value.

b. During the active life of the facility, the owner or operator shall adjust the cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with section 33.1-24-02-36. For owners and operators using the financial test or corporate guarantee, the cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before submission of updated information to the department as specified in subdivision c of subsection 5 of section 33.1-24-02-36. The adjustment may be made by recalculating the cost estimate in current dollars, or by using an inflation factor derived from the most recent implicit price deflator for gross national product published by the United States department of commerce in its survey of current business, as specified in paragraphs 1 and 2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

(1) The first adjustment is made by multiplying the cost estimate by the inflation factor. The result is the adjusted cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted cost estimate by the latest inflation factor.

c. During the active life of the facility, the owner or operator shall revise the cost estimate no later than thirty days after a change in a facility's operating plan or design that would increase the costs of conducting the activities described in subdivision a, or no later than sixty days after an unexpected event which increases the cost of conducting the activities described in subdivision a. The revised cost estimate must be adjusted for inflation as specified in subdivision b.

d. The owner or operator shall keep the following at the facility during the operating life of the facility: The latest cost estimate prepared in accordance with subdivisions a and c and, when this estimate has been adjusted in accordance with subdivision b, the latest adjusted cost estimate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-36. Financial assurance condition.

In accordance with subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04, an owner or operator of a reclamation or intermediate facility shall have financial assurance as a condition of the exclusion as required under subdivision y of subsection 1 of section 33.1-24-02-04. The owner or operator shall choose from the options as specified in subsections 1 through 5.

1. Trust fund.

a. An owner or operator may satisfy the requirements of this section by establishing a trust fund which conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the department. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or by the state department of financial institutions.

- b. The wording of the trust agreement must be identical to the wording specified in subdivision a of subsection 1 of section 33.1-24-02-42 and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see subdivision b of subsection 1 of section 33.1-24-02-42). Schedule A of the trust agreement must be updated within sixty days after a change in the amount of the current cost estimate covered by the agreement.
- c. The trust fund must be funded for the full amount of the current cost estimate before it may be relied upon to satisfy the requirements of this subsection.
- d. Whenever the current cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within sixty days after the change in the cost estimate, either shall deposit an amount into the fund so that its value after this deposit at least equals the amount of the current cost estimate, or obtain other financial assurance as specified in this section to cover the difference.
- e. If the value of the trust fund is greater than the total amount of the current cost estimate, the owner or operator may submit a written request to the department for release of the amount in excess of the current cost estimate.
- f. If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, the owner or operator may submit a written request to the department for release of the amount in excess of the current cost estimate covered by the trust fund.
- g. Within sixty days after receiving a request from the owner or operator for release of funds as specified in subdivisions e or f, the department will instruct the trustee to release to the owner or operator such funds as the department specifies in writing. If the owner or operator begins final closure under sections 33.1-24-05-59 through 33.1-24-05-69 or subsection 5 of section 33.1-24-06-16, an owner or operator may request reimbursements for partial or final closure expenditures by submitting itemized bills to the department. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. No later than sixty days after receiving bills for partial or final closure activities, the department will instruct the trustee to make reimbursements in those amounts as the department specifies in writing, if the department determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the department has reason to believe the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, the department may withhold reimbursements of such amounts as the department deems prudent until the department determines, in accordance with subsection 9, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the department does not instruct the trustee to make such reimbursements, the department will provide to the owner or operator a detailed written statement of reasons.
- h. The department will agree to termination of the trust when:
- (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
 - (2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.

2. Surety bond guaranteeing payment into a trust fund.

- a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this subsection and submitting the bond to the department. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on federal bonds in circular 570 of the United States department of the treasury.
- b. The wording of the surety bond must be identical to the wording specified in subsection 2 of section 33.1-24-02-42.
- c. The owner or operator who uses a surety bond to satisfy the requirements of this section also shall establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements specified in subsection 1, except that:
 - (1) An originally signed duplicate of the trust agreement must be submitted to the department with the surety bond; and
 - (2) Until the standby trust fund is funded pursuant to the requirements of this subsection, the following are not required by this chapter:
 - (a) Payments into the trust fund as specified in subsection 1;
 - (b) Updating of schedule A of the trust agreement (see subsection 1 of section 33.1-24-02-42) to show current cost estimates;
 - (c) Annual valuations as required by the trust agreement; and
 - (d) Notices of nonpayment as required by the trust agreement.
- d. The bond must guarantee that the owner or operator will:
 - (1) Fund the standby trust fund in an amount equal to the penal sum of the bond before loss of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04;
 - (2) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin closure is issued by the department, or within fifteen days after an order to begin closure is issued by a United States district court or other court of competent jurisdiction; or
 - (3) Provide alternate financial assurance as specified in this section, and obtain the department's written approval of the assurance provided, within ninety days after receipt by both the owner or operator and the department of a notice of cancellation of the bond from the surety.
- e. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.
- f. The penal sum of the bond must be in an amount at least equal to the current cost estimate, except as provided in subsection 6.
- g. Whenever the current cost estimate increases to an amount greater than the penal sum, the owner or operator, within sixty days after the increase, either shall cause the penal sum to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as

specified in this section to cover the increase. Whenever the current cost estimate decreases, the penal sum may be reduced to the amount of the current cost estimate following written approval by the department.

h. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the department, as evidenced by the return receipts.

i. The owner or operator may cancel the bond if the department has given prior written consent based on the department's receipt of evidence of alternate financial assurance as specified in this section.

3. Letter of credit.

a. An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this subsection and submitting the letter to the department. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal agency or by the state department of financial institutions.

b. The wording of the letter of credit must be identical to the wording specified in subsection 3 of section 33.1-24-02-42.

c. An owner or operator who uses a letter of credit to satisfy the requirements of this section also shall establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements of the trust fund specified in subsection 1, except that:

(1) An originally signed duplicate of the trust agreement must be submitted to the department with the letter of credit; and

(2) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by this chapter:

(a) Payments into the trust fund as specified in subsection 1;

(b) Updating of schedule A of the trust agreement (see subsection 1 of section 33.1-24-02-42) to show current cost estimates;

(c) Annual valuations as required by the trust agreement; and

(d) Notices of nonpayment as required by the trust agreement.

d. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: The identification number (if any issued), name, and address of the facility, and the amount of funds assured for the facility by the letter of credit.

e. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless, at least one hundred twenty days before the current

expiration date, the issuing institution notifies both the owner or operator and the department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty days will begin on the date when both the owner or operator and the department have received the notice, as evidenced by the return receipts.

f. The letter of credit must be issued in an amount at least equal to the current cost estimate, except as provided in subsection 6.

g. Whenever the current cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within sixty days after the increase, either shall cause the amount of the credit to be increased so that it at least equals the current cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current cost estimate decreases, the amount of the credit may be reduced to the amount of the current cost estimate following written approval by the department.

h. Following a determination by the department that the hazardous secondary materials do not meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, the department may draw on the letter of credit.

i. If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the department within ninety days after receipt by both the owner or operator and the department of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the department will draw on the letter of credit. The department may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last thirty days of any such extension the department will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the department.

j. The department will return the letter of credit to the issuing institution for termination when:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.

4. Insurance.

a. A owner or operator may satisfy the requirements of this section by obtaining insurance that conforms to the requirements of this subsection and submitting a certificate of such insurance to the department. At a minimum, the insurer must be licensed to transact the business of insurance in this state or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

b. The wording of the certificate of insurance must be identical to the wording specified in subsection 4 of section 33.1-24-02-42.

c. The insurance policy must be issued for a face amount at least equal to the current cost estimate, except as provided in subsection 6. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will

not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

d. The insurance policy must guarantee funds will be available whenever needed to pay the cost of removal of all hazardous secondary materials from the unit, to pay the cost of decontamination of the unit, to pay the costs of the performance of activities required under section 33.1-24-05-59 through 33.1-24-05-69 or subsection 5 of section 33.1-24-06-16, as applicable, for the facilities covered by this policy. The policy also must guarantee once funds are needed, the insurer is responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the department, to such party or parties as the department specifies.

e. After beginning partial or final closure under sections 33.1-24-05-59 through 33.1-24-05-69 or subsection 5 of section 33.1-24-06-16, as applicable, an owner or operator or any other authorized person may request reimbursements for closure expenditures by submitting itemized bills to the department. The owner or operator may request reimbursements only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within sixty days after receiving bills for closure activities, the department will instruct the insurer to make reimbursements in such amounts as the department specifies in writing if the department determines that the expenditures are in accordance with the approved plan or otherwise justified. If the department has reason to believe the maximum cost over the remaining life of the facility will be significantly greater than the face amount of the policy, the department may withhold reimbursement of such amounts as the department deems prudent until the department determines, in accordance with subsection 8, the owner or operator is no longer required to maintain financial assurance for the particular facility. If the department does not instruct the insurer to make such reimbursements, the department will provide to the owner or operator a detailed written statement of reasons.

f. The owner or operator shall maintain the policy in full force and effect until the department consents to termination of the policy by the owner or operator as specified in subdivision j of subsection 9. Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, constitutes a significant violation of this chapter warranting such remedy as the department deems necessary. Such violation is deemed to begin upon receipt by the department of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

g. Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

h. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the department. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty days beginning with the date of receipt of the notice by both the department and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect if on or before the date of expiration:

(1) The department deems the facility abandoned;

(2) Conditional exclusion or interim status is lost, terminated, or revoked;

(3) Closure is ordered by the department or a state court or other court of competent jurisdiction;

(4) The owner or operator is named as debtor in a voluntary or involuntary proceeding under United States Code title 11 (bankruptcy); or

(5) The premium due is paid.

i. Whenever the current cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within sixty days after the increase, shall either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current cost estimate decreases, the face amount may be reduced to the amount of the current cost estimate following written approval by the department.

j. The department will give written consent to the owner or operator that the department may terminate the insurance policy when:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.

5. Financial test and corporate guarantee.

a. An owner or operator may satisfy the requirements of this section by demonstrating that the owner or operator passes a financial test as specified in this subsection. To pass this test the owner or operator must meet the criteria of either paragraphs 1 or 2:

(1) The owner or operator shall have:

(a) Two of the following three ratios: A ratio of total liabilities to net worth less than two; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than one-tenth; and a ratio of current assets to current liabilities greater than one and five-tenths;

(b) Net working capital and tangible net worth each at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates;

(c) Tangible net worth of at least ten million dollars; and

(d) Assets located in the United States amounting to at least ninety percent of total assets or at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

(2) The owner or operator shall have:

(a) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;

(b) Tangible net worth at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates;

(c) Tangible net worth of at least ten million dollars; and

(d) Assets located in the United States amounting to at least ninety percent of total assets or at least six times the sum of the current cost estimates and the current plugging and abandonment cost estimates.

b. The phrase "current cost estimates" as used in subdivision a refers to the cost estimates required to be shown in paragraphs 1 through 4 of the letter from the owner's or operator's chief financial officer (subsection 5 of section 33.1-24-02-42). The phrase "current plugging and abandonment cost estimates" as used in subdivision a refers to the cost estimates required to be shown in paragraphs 1 through 4 of the letter from the owner's or operator's chief financial officer (40 CFR 144.70(f)).

c. To demonstrate the owner or operator meets this test, the owner or operator shall submit the following items to the department:

(1) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 5 of section 33.1-24-02-42;

(2) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(3) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing the owner or operator satisfies paragraph 1 of subdivision a which is different from the data in the audited financial statements referred to in paragraph 2 or any other audited financial statement or data filed with the United States securities and exchange commission, a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report must be based upon an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any differences.

d. The owner or operator may obtain an extension of the time allowed for submission of the documents specified in subdivision c if the fiscal year of the owner or operator ends during the ninety days prior to the effective date of this section and if the year end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer shall send, by the effective date of this section, a letter to the department. This letter from the chief financial officer must:

(1) Request the extension;

(2) Certify that the owner or operator has grounds to believe that the owner or operator meets the criteria of the financial test;

(3) Specify for each facility to be covered by the test the identification number (if any issued), name, address, and current cost estimates to be covered by the test;

(4) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of this section;

(5) Specify the date, no later than ninety days after the end of such fiscal year, when the owner or operator will submit the documents specified in subdivision c; and

(6) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

e. After the initial submission of items specified in subdivision c, the owner or operator shall send updated information to the department within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in subdivision c.

f. If the owner or operator no longer meets the requirements of subdivision a, the owner or operator shall send notice to the department of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator shall provide the alternate financial assurance within one hundred twenty days after the end of such fiscal year.

g. The department, based on a reasonable belief that the owner or operator may no longer meet the requirements of subdivision a, may require reports of financial condition at any time from the owner or operator in addition to those specified in subdivision c. If the department finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of subdivision a, the owner or operator shall provide alternate financial assurance as specified in this section within thirty days after notification of such a finding.

h. The department may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in the independent certified public accountant's report on examination of the owner's or operator's financial statements (see paragraph 2 of subdivision c). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The department will evaluate other qualifications on an individual basis. The owner or operator shall provide alternate financial assurance as specified in this section within thirty days after notification of the disallowance.

i. The owner or operator is no longer required to submit the items specified in subdivision c if:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this section in accordance with subsection 9.

j. An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in subdivisions a through h of subsection 5 and shall comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in subdivision a of subsection 7 of section 33.1-24-02-42. A certified copy of the guarantee must accompany the items sent to the department as specified in subdivision c. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business

relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(1) Following a determination by the department that the hazardous secondary materials at the owner or operator's facility covered by this guarantee do not meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, the guarantor will dispose of any hazardous secondary material as hazardous waste and close the facility in accordance with closure requirements found in sections 33.1-24-05-59 through 33.1-24-05-69 or subsection 5 of section 33.1-24-06-16, as applicable, or establish a trust fund as specified in subsection 1 in the name of the owner or operator in the amount of the current cost estimate.

(2) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the department, as evidenced by the return receipts.

(3) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the department within ninety days after receipt by both the owner or operator and the department of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

6. Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms must be as specified in subsections 1 through 4, respectively, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The department may use any or all of the mechanisms to provide for the facility.

7. Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the department must include a list showing, for each facility, the identification number (if any issued), name, address, and the amount of funds assured by the mechanism. If the facilities covered by the mechanism are in more than one state, identical evidence of financial assurance must be submitted to and maintained with the department and other state's agencies that regulate reclamation and intermediate facilities managing hazardous secondary materials of all such states. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for any of the facilities covered by the mechanism, the department may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

8. Removal and decontamination plan for release.

a. An owner or operator of a reclamation facility or an intermediate facility who wishes to be released from the owner's or operator's financial assurance obligations under

subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04 shall submit a plan for removing all hazardous secondary material residues to the department at least one hundred eighty days prior to the date on which the owner or operator expects to cease to operate under the exclusion.

b. The plan must include, at least:

- (1) For each hazardous secondary materials storage unit subject to financial assurance requirements under subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04, a description of how all excluded hazardous secondary materials will be recycled or sent for recycling, and how all residues, contaminated containment systems (such as liners), contaminated soils, subsoils, structures, and equipment will be removed or decontaminated as necessary to protect human health and the environment;
- (2) A detailed description of the steps necessary to remove or decontaminate all hazardous secondary material residues and contaminated containment system components, equipment, structures, and soils including, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to protect human health and the environment;
- (3) A detailed description of any other activities necessary to protect human health and the environment during this time frame, including, leachate collection, run-on and runoff control; and
- (4) A schedule for conducting the activities described which, at a minimum, includes the total time required to remove all excluded hazardous secondary materials for recycling and decontaminate all units subject to financial assurance under subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04 and the time required for intervening activities which will allow tracking of the progress of decontamination.

c. The department will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than thirty days from the date of the notice. The department will also, in response to a request or at the department's discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the plan. The department will give public notice of the hearing at least thirty days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The department will approve, modify, or disapprove the plan within ninety days of its receipt. If the department does not approve the plan, the department shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator must modify the plan or submit a new plan for approval within thirty days after receiving such written statement. The department will approve or modify this plan in writing within sixty days. If the department modifies the plan, this modified plan becomes the approved plan. The department shall assure the approved plan is consistent with this subsection. A copy of the modified plan with a detailed statement of reasons for the modifications must be mailed to the owner or operator.

d. Within sixty days of completion of the activities described for each hazardous secondary materials management unit, the owner or operator shall submit to the department, by registered mail, a certification that all hazardous secondary materials have been removed from the unit and the unit has been decontaminated in accordance with the specifications

in the approved plan. The certification must be signed by the owner or operator and by a qualified professional engineer. Documentation supporting the professional engineer's certification must be furnished to the department, upon request, until the department releases the owner or operator from the financial assurance requirements for subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04.

9. Release of the owner or operator from the requirements of this section. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility and the facility or a unit has been decontaminated in accordance with the approved plan per subsection 8, the department will notify the owner or operator in writing that the owner or operator is no longer required under subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04 to maintain financial assurance for that facility or a unit at the facility, unless the department has reason to believe that all hazardous secondary materials have not been removed from the facility or unit at a facility or that the facility or unit has not been decontaminated in accordance with the approved plan. The department shall provide the owner or operator a detailed written statement of any such reason to believe that all hazardous secondary materials have not been removed from the unit or that the unit has not been decontaminated in accordance with the approved plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-37. [Reserved].

33.1-24-02-38. [Reserved].

33.1-24-02-39. [Reserved].

33.1-24-02-40. Liability requirements.

1. Coverage for sudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or an intermediate facility subject to financial assurance requirements under subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04, or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in subdivision a, b, c, d, e, or f:

- a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subdivision.

- (1) Each insurance policy must be amended by attachment of the hazardous secondary material facility liability endorsement, or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 8 of section 33.1-24-02-42. The wording of the certificate of insurance must be identical to the wording specified in subsection 9 of section 33.1-24-02-42. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department, and other state's agencies that regulate reclamation and intermediate facilities if the facilities are located in more than one

state. If requested by the department, the owner or operator shall provide a signed duplicate original of the insurance policy.

(2) Each insurance policy must be issued by an insurer that, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

b. An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in subsections 6 and 7.

c. An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in subsection 8.

d. An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in subsection 9.

e. An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in subsection 10.

f. An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subdivision, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

g. An owner or operator shall notify the department in writing within thirty days whenever:

(1) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in subdivisions a through f;

(2) A certification of valid claim for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is entered between the owner or operator and third-party claimant for liability coverage under subdivisions a through f; or

(3) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous secondary material reclamation facility or intermediate facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under subdivisions a through f.

2. Coverage for nonsudden accidental occurrences. An owner or operator of a hazardous secondary material reclamation facility or intermediate facility with landbased units, as defined in section 33.1-24-01-04, which are used to manage hazardous secondary materials excluded under subdivision y of subsection 1 of section 33.1-24-02-04 or a group of such facilities, shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three million dollars per occurrence with an annual

aggregate of at least six million dollars, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences shall maintain liability coverage in the amount of at least four million dollars per occurrence and eight million dollars annual aggregate. This liability coverage may be demonstrated as specified in subdivision a, b, c, d, e, or f:

a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subsection.

(1) Each insurance policy must be amended by attachment of the hazardous secondary material facility liability endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 8 of section 33.1-24-02-42. The wording of the certificate of insurance must be identical to the wording specified in subsection 9 of section 33.1-24-02-42. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department, and other state's agencies that regulate reclamation and intermediate facilities if the facilities are located in more than one state. If requested by a department, the owner or operator shall provide a signed duplicate original of the insurance policy.

(2) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states.

b. An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in subsections 6 and 7.

c. An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in subsection 8.

d. An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in subsection 9.

e. An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in subsection 10.

f. An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subdivision, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

g. An owner or operator shall notify the department in writing within thirty days whenever:

(1) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in subdivisions a through f;

(2) A certification of valid claim for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous secondary material treatment and/or storage facility is entered between the owner or operator and third-party claimant for liability coverage under subdivisions a through f; or

(3) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous secondary material treatment or storage facility, or both, is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under subdivisions a through f.

3. Request for variance. If an owner or operator can demonstrate to the satisfaction of the department that the levels of financial responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment or storage, or both, at the facility or group of facilities, the owner or operator may obtain a variance from the department. The request for a variance must be submitted in writing to the department. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The department may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the department to determine a level of financial responsibility other than that required by subsection 1 or 2.

4. Adjustments by the department. If the department determines the levels of financial responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment or storage, or both, at the facility or group of facilities, the department may adjust the level of financial responsibility required under subsection 1 or 2 as may be necessary to protect human health and the environment. This adjusted level will be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the department determines there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, pile, or land treatment facility, the department may require an owner or operator of the facility to comply with subsection 2. An owner or operator shall furnish to the department, within a reasonable time, any information the department requests to determine whether cause exists for such adjustments of level or type of coverage.

5. Period of coverage. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that all hazardous secondary materials have been removed from the facility or a unit at the facility and the facility or a unit has been decontaminated in accordance with the approved plan per subsection 8 of section 33.1-24-02-36, the department will notify the owner or operator in writing that the owner or operator is no longer required under subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04 to maintain liability coverage for that facility or a unit at the facility, unless the department has reason to believe all hazardous secondary materials have not been removed from the facility or unit at a facility or that the facility or unit has not been decontaminated in accordance with the approved plan.

6. Financial test for liability coverage.

a. An owner or operator may satisfy the requirements of this section by demonstrating that the owner or operator passes a financial test as specified in this subsection. To pass this test the owner or operator shall meet the criteria of paragraph 1 or 2:

(1) The owner or operator shall have:

(a) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test;

(b) Tangible net worth of at least ten million dollars; and

(c) Assets in the United States amounting to either:

[1] At least ninety percent of the owner's or operator's total assets; or

[2] At least six times the amount of liability coverage to be demonstrated by this test.

(2) The owner or operator shall have:

(a) A current rating for the owner's or operator's most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's;

(b) Tangible net worth of at least ten million dollars;

(c) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(d) Assets in the United States amounting to either:

[1] At least ninety percent of the owner's or operator's total assets; or

[2] At least six times the amount of liability coverage to be demonstrated by this test.

b. The phrase "amount of liability coverage" as used in subdivision a refers to the annual aggregate amounts for which coverage is required under subsections 1 and 2 and the annual aggregate amounts for which coverage is required under subsections 1 and 2 of section 33.1-24-05-79 and subsection 5 of section 33.1-24-06-16.

c. To demonstrate the owner or operator meets this test, the owner or operator shall submit the following three items to the department:

(1) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 6 of section 33.1-24-02-42. If an owner or operator is using the financial test to demonstrate both assurance as specified by subsection 5 of section 33.1-24-02-36, and liability coverage, the owner or operator shall submit the letter specified in subsection 6 of section 33.1-24-02-42 to cover both forms of financial responsibility; a separate letter as specified in subsection 5 of section 33.1-24-02-42 is not required.

(2) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(3) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing the owner or operator satisfies paragraph 1 of subdivision a which is different from the data in the audited financial statements referred to in paragraph 2 of subdivision c or any other audited financial statement or data filed with the securities and exchange commission, a special report from the owner's or operator's independent certified public accountant to the owner or operator is

required. The special report must be based upon an agreed upon procedures engagement in accordance with professional auditing standards and must describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of the comparison, and the reasons for any difference.

d. The owner or operator may obtain a one-time extension of the time allowed for submission of the documents specified in subdivision c if the fiscal year of the owner or operator ends during the ninety days prior to the effective date of this section and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than ninety days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer shall send, by the effective date of this section, a letter to the department. This letter from the chief financial officer must:

(1) Request the extension;

(2) Certify the owner or operator has grounds to believe that the owner or operator meets the criteria of the financial test;

(3) Specify for each facility to be covered by the test the identification number, name, address, the amount of liability coverage and, when applicable, current closure and postclosure cost estimates to be covered by the test;

(4) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of this section;

(5) Specify the date, no later than ninety days after the end of such fiscal year, when the owner or operator will submit the documents specified in subdivision c; and

(6) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

e. After the initial submission of items specified in subdivision c, the owner or operator shall send updated information to the department within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in subdivision c.

f. If the owner or operator no longer meets the requirements of subdivision a, the owner or operator shall obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the department within ninety days after the end of the fiscal year for which the yearend financial data shows the owner or operator no longer meets the test requirements.

g. The department may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in the independent certified public accountant's report on examination of the owner's or operator's financial statements (see paragraph 2 of subdivision c). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The department will evaluate other qualifications on an individual basis. The owner or operator shall provide evidence of insurance for the entire amount of required liability coverage as specified in this section within thirty days after notification of disallowance.

7. Guarantee for liability coverage.

a. Subject to subdivision b, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor shall meet the requirements for owners or operators in subdivision a through f of subsection 6. The wording of the guarantee must be identical to the wording specified in subdivision b of subsection 7 of section 33.1-24-02-42. A certified copy of the guarantee must accompany the items sent to the department as specified in paragraph c of subsection 6. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(1) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(2) [Reserved]

b. The following applies:

(1) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the attorneys general or insurance commissioners of:

(a) The state in which the guarantor is incorporated; and

(b) Each state in which a facility covered by the guarantee is located have submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 7 of section 33.1-24-02-42 is a legally valid and enforceable obligation in that state.

(2) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if:

(a) The nonUnited States corporation has identified a registered agent for service of process in each state in which a facility covered by the guarantee is located and in the state in which it has its principal place of business; and if

(b) The attorney general or insurance commissioner of each state in which a facility covered by the guarantee is located and the state in which the guarantor corporation has its principal place of business, has submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 8 of section 33.1-24-02-42 is a legally valid and enforceable obligation in that state.

8. Letter of credit for liability coverage.

- a. An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this subsection and submitting a copy of the letter of credit to the department.
- b. The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.
- c. The wording of the letter of credit must be identical to the wording specified in subsection 10 of section 33.1-24-02-42.
- d. An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- e. The wording of the standby trust fund must be identical to the wording specified in subsection 13 of section 33.1-24-02-42.

9. Surety bond for liability coverage.

- a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this subsection and submitting a copy of the bond to the department.
- b. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the most recent circular 570 of the United States department of the treasury.
- c. The wording of the surety bond must be identical to the wording specified in subsection 11 of section 33.1-24-02-42.
- d. A surety bond may be used to satisfy the requirements of this section only if the attorneys general or insurance commissioners of:
 - (1) The state in which the surety is incorporated; and
 - (2) Each state in which a facility covered by the surety bond is located have submitted a written statement to the department that a surety bond executed as described in this section and subsection 11 of section 33.1-24-02-42 is a legally valid and enforceable obligation in that state.

10. Trust fund for liability coverage.

- a. An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the department.
- b. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.
- c. The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the

requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, either shall add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided or obtain other financial assurance as specified in this section to cover the difference. For purposes of this subdivision, "the full amount of the liability coverage to be provided" means the amount of coverage for sudden or nonsudden, or both, occurrences required to be provided by the owner or operator by this section, less the amount of financial assurance for liability coverage which is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

- d. The wording of the trust fund must be identical to the wording specified in subsection 12 of section 33.1-24-02-42.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-41. Incapacity of owners or operators, guarantors, or financial institutions.

1. An owner or operator shall notify the department by certified mail of the commencement of a voluntary or involuntary proceeding under United States Code title 11 (bankruptcy), naming the owner or operator as debtor, within ten days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in subsection 5 of section 33.1-24-02-36 shall make such a notification if the owner or operator is named as debtor, as required under the terms of the corporate guarantee.
2. An owner or operator who fulfills the requirements of section 33.1-24-02-36 or 33.1-24-02-40 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within sixty days after such an event.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-42. Wording of the instruments.

1. Trust agreement and certification of acknowledgment.
 - a. A trust agreement for a trust fund as specified in subsection 1 of section 33.1-24-02-36 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT, the "AGREEMENT" entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation" "partnership," "association" or "proprietorship"], the "GRANTOR," and [name of corporate trustee], [insert "incorporated in the state of _____" or "a national bank"], the "TRUSTEE".

Whereas, the North Dakota department of environmental quality "DEPARTMENT" a regulatory agency of the state of North Dakota, has established certain regulations

applicable to the GRANTOR requiring that an owner or operator of a facility regulated under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819 or subsection 5 of section 33.1-24-06-16, or satisfying the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04 shall provide assurance that funds will be available when needed for care of the facility under sections 33.1-24-05-59 through 33.1-24-05-73 or subsection 5 of section 33.1-24-06-16, as applicable.

Whereas, the GRANTOR has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the GRANTOR acting through its duly authorized officers has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT and the TRUSTEE is willing to act as TRUSTEE,

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

- (a) The term GRANTOR means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.
- (b) The term TRUSTEE means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities and Cost Estimate. This AGREEMENT pertains to the facilities and cost estimates identified on attached schedule A [on schedule A for each facility list the identification number (if available), name, address and the current cost estimates, or portions thereof, for which financial assurance is demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a trust fund, the FUND, for the benefit of the DEPARTMENT in the event that the hazardous secondary materials of the grantor no longer meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04. The GRANTOR and the TRUSTEE intend that no third party have access to the FUND, except as herein provided. The FUND is established initially as consisting of the property which is acceptable to the TRUSTEE and described in schedule B attached hereto. Such property and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND must be held by the TRUSTEE, IN TRUST, as herein provided. The TRUSTEE is not responsible, nor may it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payments from the Fund. The TRUSTEE shall make payments from the FUND as the DEPARTMENT shall direct, in writing, to provide for the payment of the costs of the performance of activities required under sections 33.1-24-05-59 through 33.1-24-05-73 or subsection 5 of section 33.1-24-06-16 for the facilities covered by this AGREEMENT. The TRUSTEE shall reimburse the GRANTOR or other persons as specified by the DEPARTMENT from the FUND for expenditures for such activities in such amounts as the DEPARTMENT shall direct in writing. In addition, the TRUSTEE shall refund to the GRANTOR such amounts as the DEPARTMENT specifies in writing. Upon refund such funds shall no longer constitute part of the FUND as defined herein.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND must consist of cash or securities acceptable to the TRUSTEE.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income of the FUND and keep the FUND invested as a single FUND without distinction between principal and income in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject however to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the TRUSTEE's duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the GRANTOR or any other owner or operator of the facilities or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), may not be acquired or held unless they are securities or other obligations of a federal or state government;
- (b) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (c) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common, commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without, in any way, eliminating the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE is bound to see the application of the purchase money or to inquire into the validity or expediency of any such sale or disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a

qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE shall at all times show that all such securities are part of the FUND;

(d) To deposit any cash in the FUND in interest bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate capacity, or in any other banking institution affiliated with the TRUSTEE to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the FUND.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this TRUST, including fees for legal services rendered to the TRUSTEE, the compensation of the TRUSTEE to the extent not paid directly by the GRANTOR and all other proper charges and disbursements of the TRUSTEE, must be paid from the FUND.

Section 10. Annual Valuation. The TRUSTEE shall annually, at least thirty days prior to the anniversary date of establishment of the FUND, furnish to the GRANTOR and to the DEPARTMENT a statement confirming the value of the TRUST. Any securities in the FUND must be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the FUND. The failure of the GRANTOR to object in writing to the TRUSTEE within ninety days after the statement has been furnished to the GRANTOR and the DEPARTMENT, constitutes a conclusively binding assent by the GRANTOR barring the GRANTOR from asserting any claim or liability against the TRUSTEE with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR, with respect to any question arising as to construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected to the extent permitted by law in acting upon the advice of counsel.

Section 12. TRUSTEE Compensation. The TRUSTEE is entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 13. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement is not effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE's acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason, the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the TRUST in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section must be paid as provided in section 9.

Section 14. Instructions to the TRUSTEE. All orders, requests, and instructions by the GRANTOR to the TRUSTEE must be in writing, signed by such persons as are designated in

the attached Exhibit A, or such other designees as the GRANTOR may designate by amendment to Exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR's orders, requests, and instructions. All orders, requests, and instructions by the DEPARTMENT to the TRUSTEE must be in writing, signed by an authorized DEPARTMENT representative and the TRUSTEE shall act and be fully protected in acting in accordance with such orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or the DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR or the DEPARTMENT, or both, except as provided for herein.

Section 15. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist.

Section 16. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in section 15, this TRUST is irrevocable and continues until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the TRUST, all remaining trust property, less final trust administration expenses, must be delivered to the GRANTOR.

Section 17. Immunity and Indemnification. The TRUSTEE may not incur personal liability of any nature in connection with any act or omission made in good faith in the administration of this TRUST or in carrying out any directions by the GRANTOR or the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE must be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 18. Choice of Law. This AGREEMENT must be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 19. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT do not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto fixed and attested as of the date first above written: The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subdivision a of subsection 1 of North Dakota Administrative Code section 33.1-24-02-42 as such regulation was constituted on the date first above written.

[Signature of GRANTOR]

[Title]

[Attest:]

[Title]

[Seal]

[Signature of TRUSTEE]

[Attest:]

[Title]

[Seal]

b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a trust fund as specified in subsection 1 of section 33.1-24-02-36.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

2. A surety bond guaranteeing payment into a trust fund as specified in subsection 2 of section 33.1-24-02-36 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "joint venture," "partnership" or "corporation"]

State of incorporation: _____

Surety(ies): [name(s) and business address(es)]

Identification number, name, address and amount or amounts for each facility guaranteed by this bond: _____

Total penal sum of bond: \$ _____

Surety's bond number: _____

Know all persons by these presents that we the PRINCIPAL and SURETY(IES) hereto are firmly bound to the North Dakota Department of Environmental Quality (hereinafter called the DEPARTMENT) in the event that the hazardous secondary materials of the grantor no longer meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assignors jointly and severally; provided that where the SURETY(IES) are corporations acting as cosureties, we, the SURETIES, bind ourselves in

such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each SURETY binds itself, jointly and severally with the PRINCIPAL, for the payment of such sum only as is set forth opposite the name of such SURETY, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said PRINCIPAL is required under North Dakota Century Code chapter 23.1-04 to have a permit or interim status in order to own or operate each facility identified above, or to meet conditions under subdivision y of subsection 1 of section 33.1-24-02-04, and

Whereas said PRINCIPAL is required to provide financial assurance as a condition of permit or interim status or as a condition of an exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, and

Whereas said PRINCIPAL shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the PRINCIPAL shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amounts identified above for the facility,

Or, if the PRINCIPAL shall satisfy all the conditions established for exclusion of hazardous secondary materials from coverage as solid waste under subdivision y of subsection 1 of section 33.1-24-02-04,

Or, if the PRINCIPAL shall fund the standby trust fund in such amounts within fifteen days after an order to begin closure is issued by the DEPARTMENT or a state or other court of competent jurisdiction,

Or, if the PRINCIPAL shall provide alternate financial assurance as specified in sections 33.1-24-02-33 through 33.1-24-02-42, as applicable, and obtain the DEPARTMENT's written approval of such assurance within ninety days after the date of notice of cancellation is received by both the PRINCIPAL and the DEPARTMENT from the SURETY(IES), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The SURETY(IES) shall become liable on this bond obligation only when the PRINCIPAL has failed to fulfill the conditions described above. Upon notification by the DEPARTMENT that the PRINCIPAL has failed to perform as guaranteed by this bond, the SURETY(IES) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the DEPARTMENT.

The liability of the SURETY(IES) shall not be discharged by any payment or any succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the SURETY(IES) hereunder exceed the amount of said penal sum.

The SURETY(IES) may cancel the bond by sending notice of cancellation by certified mail to the PRINCIPAL and to the DEPARTMENT, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the PRINCIPAL and the DEPARTMENT as evidenced by the return receipts.

The PRINCIPAL may terminate this bond by sending written notice to the SURETY(IES) provided, however, that no such notice shall become effective until the SURETY(IES) receive(s) written authorization for termination of the bond by the DEPARTMENT.

[The following paragraph is an optional rider that may be included, but is not required]

The PRINCIPAL and SURETY(IES) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new amount, provided that the penal sum does not increase by more than twenty percent in any one year, and no decrease in the penal sum takes place without the written permission of the DEPARTMENT.

In witness whereof, the PRINCIPAL and SURETY(IES) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the PRINCIPAL and SURETY(IES) and that the wording of this surety bond is identical to the wording specified in subsection 2 of North Dakota Administrative Code section 33.1-24-02-42 as such rule was constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

CORPORATE SURETY(IES)

[Name and address]

State of Incorporation: _____

Liability limit: \$ _____

[Signature(s)]

[Name(s) and Title(s)]

[Corporate seal]

[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ _____

3. A letter of credit as specified in subsection 3 of section 33.1-24-02-36 must be worded as follows except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Director, North Dakota Department of Environmental Quality

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit Number _____ in your favor, in the event that the hazardous secondary materials at the covered reclamation or intermediary facility or facilities no longer meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] United States Dollars \$ _____, available upon presentation by you of

(1) Your sight draft bearing reference to this letter of credit Number _____, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of North Dakota Century Code chapter 23.1-04".

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subsection 3 of North Dakota Administrative Code section 33.1-24-02-42 as such rule was constituted on the date shown immediately below.

[Signature(s) and Title(s) of Official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce", or "the Uniform Commercial Code"]

4. A certificate of insurance as specified in subsection 4 of section 33.1-24-02-36 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATE OF INSURANCE

Name and address of insurer (hereinafter called the "INSURER"): _____

Name and address of Insured (hereinafter called the "INSURED"): _____

Facilities covered: [List for each facility: the identification number (if any issued),

name, address and amount of insurance for closure or the amount of insurance for all

facilities covered, which must total the face amount shown below.]

Face amount: _____

Policy Number: _____

Effective Date: _____

The INSURER hereby certifies that it has issued to the INSURED the policy of insurance identified above to provide financial assurance so that in accordance with applicable regulations all hazardous secondary materials can be removed from the facility or any unit at the facility and the facility or any unit at the facility can be decontaminated at the facilities identified above. The INSURER further warrants that such policy conforms in all respects with the requirements of subsection 4 of North Dakota Administrative Code section 33.1-24-02-36, as applicable and as

such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such rules is hereby amended to eliminate such inconsistency.

When requested by the North Dakota Department of Environmental Quality (DEPARTMENT) the INSURER agrees to furnish to the DEPARTMENT a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in subsection 4 of North Dakota Administrative Code section 33.1-24-02-42 as such rule was constituted on the date shown immediately below.

[Authorized signature for INSURER]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

[Date]

5. A letter from the chief financial officer, as specified in subsection 5 of section 33.1-24-02-36, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Letter from Chief Financial Officer

[Address to North Dakota Department of Environmental Quality].

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance, as specified in sections 33.1-24-02-33 through 33.1-24-02-42.

[Fill out the following nine paragraphs regarding facilities and associated cost

estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number (if any issued), name, address, and current cost estimates.]

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates covered by the test are shown for each facility: _____.

2. This firm guarantees, through the guarantee specified in sections 33.1-24-02-33 through 33.1-24-02-42, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: _____. The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. This firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of the financial test specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates covered by such a test are shown for each facility: _____.
4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanism specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates not covered by such financial assurance are shown for each facility: _____.
5. This firm is the owner or operator of the following underground injection control facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.
6. This firm is the owner or operator of the following facilities for which financial assurance for closure or postclosure care is demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16. The current closure and/or postclosure cost estimates covered by the test are shown for each facility: _____.
7. This firm guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16, the closure or postclosure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or postclosure care so guaranteed are shown for each facility: _____. The firm identified above is [insert one or more: (1) the direct or higher-tiered parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____ : or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].
8. This firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or postclosure care of the following facilities through the use of the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16. The current closure and/or postclosure cost estimates covered by such a test are shown for each facility: _____.
9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, postclosure care, is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanism specified in sections 33.1-24-05-74 through 33.1-24-05-88 and subsection 5 of section 33.1-24-06-16. The current closure and/or postclosure estimates not covered by such financial assurance are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a form 10K with the securities and exchange commission for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 5 of section 33.1-24-02-36 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 5 of section 33.1-24-02-36 are used].

<u>Alternative I</u>	
1.	<u>Sum of current cost estimate (total of all costs estimates shown in the nine paragraphs above). \$ _____</u>
*2.	<u>Total liabilities (if any portion of the cost estimate is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4). \$ _____</u>
*3.	<u>Tangible net worth. \$ _____</u>
*4.	<u>Net worth. \$ _____</u>
*5.	<u>Current assets. \$ _____</u>
*6.	<u>Current liabilities. \$ _____</u>
7.	<u>Net working capital (line 5 minus line 6) \$ _____</u>
*8.	<u>The sum of net income plus depreciation, depletion, and amortization. \$ _____</u>
*9.	<u>Total assets in the United States (required only if less than 90% of firm's assets are located in the United States). \$ _____</u>
	<u>Yes</u>
	<u>No</u>
10.	<u>Is line 3 at least \$10 million?</u>
11.	<u>Is line 3 at least 6 times line 1?</u>
12.	<u>Is line 7 at least 6 times line 1?</u>
*13.	<u>Are at least 90% of firm's assets located in the United States? If not, complete line 14.</u>
14..	<u>Is line 9 at least 6 times line 1?</u>
15.	<u>Is line 2 divided by line 4 less than 2.0?</u>
16.	<u>Is line 8 divided by line 2 greater than 0.1?</u>
17.	<u>Is line 5 divided by line 6 greater than 1.5?</u>
<u>Alternative II</u>	
1.	<u>Sum of current cost estimates (total of all cost estimates shown in the nine paragraphs above). \$ _____</u>
2.	<u>Current bond rating of most recent issuance of this firm and name of rating service. \$ _____</u>
3.	<u>Date of issuance of bond. \$ _____</u>
4.	<u>Date of maturity of bond. \$ _____</u>
*5.	<u>Tangible net worth (if any portion of the cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line). \$ _____</u>
*6.	<u>Total assets in United States (required only if less than 90% of firm's assets are located in the United States). \$ _____</u>
	<u>Yes</u>

<u>No</u>
<u>7. Is line 5 at least \$10 million?</u>
<u>8. Is line 5 at least 6 times line 1?</u>
<u>*9. Are at least 90% of firm's assets located in the United States? If not, complete line 10.</u>
<u>10. Is line 6 at least 6 times line 1?</u>

I hereby certify that the wording of this letter is identical to the wording specified in subsection 5 of section 33.1-24-02-42 as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

6. A letter from the chief financial officer, as specified in subsection 6 of section 33.1-24-02-40, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Letter from Chief Financial Officer:

[Address to North Dakota Department of Environmental Quality].

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage under 33.1-24-02-40 [insert "and costs assured subsection 5 of section 33.1-24-02-36" if applicable] as specified in sections 33.1-24-02-33 through 33.1-24-02-42.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number (if any issued), name, and address.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrence is being demonstrated through the financial test specified in sections 33.1-24-02-33 through 33.1-24-02-42:

The firm identified above guarantees, through the guarantee specified in sections 33.1-24-02-33 through 33.1-24-02-42, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: _____ . The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee or (3) engaged in the following substantial business relationship with the owner or operator _____ , and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental

occurrences is being demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16: .

The firm identified above guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: _____ . The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____ ; or (3) engaged in the following substantial business relationship with the owner operator _____ , and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and costs assured under subsection 5 of section 33.1-24-02-36 or closure or postclosure case costs under sections 33.1-24-05-77 or subsection 5 of section 33.1-24-06-16, fill in the following nine paragraphs regarding facilities and associated cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number (if any issued), name, address, and current cost estimates.]

1. This firm is the owner or operator of the following facilities for which financial assurance is demonstrated through the financial test specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates covered by the test are shown for each facility _____ .

2. This firm guarantees, through the guarantee specified in sections 33.1-24-02-33 through 33.1-24-02-42, the following facilities owned or operated by the guaranteed party. The current cost estimates so guaranteed are shown for each facility: _____. The firm identified above is [insert one or more: (1) the direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____ , or (3) engaged in the following substantial business relationship with the owner or operator _____ , and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. This firm, as owner or operator or guarantor, is demonstrating financial assurance for the following facilities through the use of the financial test specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates covered by such a test are shown for each facility: _____ .

4. This firm is the owner or operator of the following hazardous secondary materials management facilities for which financial assurance is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanism specified in sections 33.1-24-02-33 through 33.1-24-02-42. The current cost estimates not covered by such financial assurance are shown for each facility: _____ .

5. This firm is the owner or operator or guarantor of the following underground injection control facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____ .

6. This firm is the owner or operator of the following facilities for which financial assurance for closure or postclosure care is demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88 and subsection 5 of section 33.1-24-06-16.

The current closure and /or postclosure cost estimates covered by the test are shown for each facility: _____.

7. This firm guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88 and subsection 5 of section 33.1-24-06-16, the closure or postclosure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or postclosure care so guaranteed are shown for each facility: . The firm identified above is the [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee ; or (3) engaged in the following substantial business relationship with the owner or operator , and receiving the following value in consideration of this guarantee]. [Attach a written description of the business relationship or a copy of the contract establishing such a relationship to this letter].

8. This firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or postclosure care of the following facilities through the use the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88. The current closure and/or postclosure cost estimates covered by such a test are shown for each facility: .

9. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, postclosure care, is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanism specified in sections 33.1-24-05-74 through 33.1-24-05-88 or subsection 5 of section 33.1-24-06-16. The current closure and/or postclosure cost estimates not covered by such financial assurance are shown for each facility: .

This firm [insert "is required" or "is not required"] to file a form 10K with the securities and exchange commission for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 6 of section 33.1-24-02-40 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 6 of section 33.1-24-02-40 are used].

Alternative I	
1.	Amount of annual aggregate liability coverage to be demonstrated \$ _____
*2.	Current assets. \$ _____
*3.	Current liabilities.\$ _____
4.	Net working capital (line 2 minus line 3). \$ _____
*5.	Tangible net worth. \$ _____
*6.	If less than 90% of assets are located in the United States, give total United States assets. \$ _____
<u>Yes</u>	
<u>No</u>	

7.	<u>Is line 5 at least \$10 million?</u>
8.	<u>Is line 4 at least 6 times line 1?</u>
9.	<u>Is line 5 at last 6 times line 1?</u>
*10.	<u>Are at least 90% of assets located in the United States?</u> <u>If not, complete line 11.</u>
11.	<u>Is line 6 at least 6 times line 1?</u>
<u>Alternative II</u>	
1.	<u>Amount of annual aggregate liability coverage to be demonstrated. \$ _____</u>
2.	<u>Current bond rating of most recent issuance and name of rating service.</u>
3.	<u>Date of issuance of bond.</u>
4.	<u>Date of maturity of bond.</u>
*5.	<u>Tangible net worth. \$ _____</u>
*6.	<u>Total assets in United States (required only if less than 90% of assets are located in the United States) \$ _____</u>
<u>Yes</u>	
<u>No</u>	
7.	<u>Is line 5 at least \$10 million?</u>
8.	<u>Is line at least 6 times line 1?</u>
9.	<u>Are at least 90% of assets located in the United States?</u> <u>If not, complete line 10.</u>
10.	<u>Is line 6 at least 6 times line 1?</u>

[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and costs assured under subsection 5 of section 33.1-24-02-36 or closure or postclosure care costs under section 33.1-24-05-77 or subsection 5 of section 33.1-24-06-16.]

Part B. Facility Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 5 of section 33.1-24-02-36 and paragraph 1 of subdivision a of subsection 6 of section 33.1-24-02-40 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 5 of section 33.1-24-02-36 and paragraph 2 of subdivision a of subsection 6 of section 33.1-24-02-40 are used].

<u>Alternative I</u>	
1.	<u>Sum of current cost estimates (total of all cost estimates listed above). \$ _____</u>
2.	<u>Amount of annual aggregate liability coverage to be demonstrated. \$ _____</u>
3.	<u>Sum of lines 1 and 2. \$ _____</u>
*4.	<u>Total liabilities (if any portion of your closure or postclosure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6). \$ _____</u>
*5.	<u>Tangible net worth. \$ _____</u>

*6.	<u>Net worth. \$ _____</u>
*7.	<u>Current assets. \$ _____</u>
*8.	<u>Current liabilities. \$ _____</u>
9.	<u>Net working capital (line 7 minus line 8). \$ _____</u>
*10.	<u>The sum of net income plus depreciation, depletion, and amortization. \$ _____</u>
*11.	<u>Total assets in United States (required only if less than 90% of assets are located in the United States). \$ _____</u>
	<u>Yes</u>
	<u>No</u>
12.	<u>Is line 5 at least \$10 million?</u>
13.	<u>Is line 5 at least 6 times line 3?</u>
14.	<u>Is line 9 at least 6 times line 3?</u>
*15.	<u>Are at least 90% of assets located in the United States? If not, complete line 16.</u>
16.	<u>Is line 11 at least 6 times line 3?</u>
17.	<u>Is line 4 divided by line 6 less than 2.0?</u>
18.	<u>Is line 10 divided by line 4 greater than 0.1?</u>
19.	<u>Is line 7 divided by line 8 greater than 1.5?</u>
<u>Alternative II</u>	
1.	<u>Sum of current cost estimate (total of all cost estimates listed above). \$ _____</u>
2.	<u>Amount of annual aggregate liability coverage to be demonstrated. \$ _____</u>
3.	<u>Sum of lines 1 and 2. \$ _____</u>
4.	<u>Current bond rating of most recent issuance and name of rating service. \$ _____</u>
*5.	<u>Date of issuance of bond.</u>
*6.	<u>Date of maturity of bond.</u>
*7.	<u>Tangible net worth (if any portion of the cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line). \$ _____</u>
*8.	<u>Total assets in the United States (required only if less than 90% of assets are located in the United States). \$ _____</u>
	<u>Yes</u>
	<u>No</u>
9.	<u>Is line 7 at least \$10 million?</u>
10.	<u>Is line 7 at least 6 times line 3?</u>
*11.	<u>Are at least 90% of assets located in the United States? If not, complete line 12.</u>
12.	<u>Is line 8 at least 6 times line 3?</u>

I hereby certify that the wording of this letter is identical to the wording specified in subsection 6 of section 33.1-24-02-42 as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

7. Corporate guarantee for facility care

- a. A corporate guarantee, as specified in subsection 5 of section 33.1-24-02-36, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Corporate Guarantee for Facility Care

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the state of [insert name of state], herein referred to as guarantor. This guarantee is made on behalf of the [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in subsection 8 of section 33.1-24-05-75"] to the DEPARTMENT.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsection 5 of section 33.1-24-02-36.
2. [Owner or operator] owns or operates the following facility(ies) covered by this guarantee: [List for each facility: identification number (if any issued), name, and address.]
3. "Closure plans" as used below refer to the plans maintained as required by sections 33.1-24-02-33 through 33.1-24-02-42 for the care of facilities as identified above.
4. For value received from [owner or operator], guarantor guarantees that in the event of a determination by the department that the hazardous secondary materials at the owner or operator's facility covered by this guarantee do not meet the conditions of the exclusion under subdivision y of subsection 1 of section 33.1-24-02-04, the guarantor shall dispose of any hazardous secondary material as hazardous waste, and close the facility in accordance with closure requirements found in sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819 or subsection 5 of section 33.1-24-06-16, as applicable, or establish a trust fund as specified in subsection 1 of section 33.1-24-02-36 in the name of the owner or operator in the amount of the current cost estimate.
5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety days, by certified mail, notice to the DEPARTMENT and to [owner or operator] that the guarantor intends to provide alternate financial assurance as specified in sections 33.1-24-02-33 through 33.1-24-02-42, as applicable, in the name of [owner or operator]. Within one hundred twenty days after the end of such fiscal

year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the DEPARTMENT by certified mail, of a voluntary or involuntary proceeding under title 11 (Bankruptcy), United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding.

7. Guarantor agrees that within thirty days after being notified by the DEPARTMENT of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor, the guarantor shall establish alternate financial assurance as specified in sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-02-33 through 33.1-24-02-42, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure plan, the extension or reduction of the time of performance, or any other modification or alteration of an obligation of the owner or operator pursuant to sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-02-33 through 33.1-24-02-42.

9. Guarantor agrees to remain bound under this guarantee for as long as [owner or operator] must comply with the applicable financial assurance requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819 and subsection 5 of section 33.1-24-06-16 or the financial assurance condition of subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04 for the above listed facilities, except as provided in paragraph 10 of this AGREEMENT.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the DEPARTMENT and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the DEPARTMENT approves, alternate coverage complying with section 33.1-24-02-36.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator.]

Guarantor may terminate this guarantee one hundred twenty days following the receipt of notification, through certified mail, by the DEPARTMENT and by [the owner or operator].

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-02-33 through 33.1-24-02-42, as applicable, and obtain written approval of such assurance from the DEPARTMENT within ninety days after a notice

of cancellation by the guarantor is received by the DEPARTMENT from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

-
12. Guarantor expressly waives notice of acceptance of this guarantee by the DEPARTMENT or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, or sections 33.1-24-02-33 through 33.1-24-02-42.

I hereby certify that the wording of this guarantee is identical to the wording specified in subdivision a of subsection 7 of section 33.1-24-02-42 as such regulations were constituted on the date first above written.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

-
- b. A guarantee, as specified in subsection 7 of section 33.1-24-02-40, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the state of " and insert name of state; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in subsection 8 of section 33.1-24-05-75", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

-
1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsection 7 of section 33.1-24-02-40.
-
2. [Owner or operator] owns or operates the following facility(ies) covered by this guarantee: [List for each facility: identification number (if any issued), name, and

address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State.] This corporate guarantee satisfies Resource Conservation and Recovery Act third-party liability requirements for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

(A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert owner or operator];

(2) Premises that are sold, given away, or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert owner or operator];

(4) Personal property in the care, custody, or control of [insert owner or operator];

(5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety days, by certified mail, notice to the DEPARTMENT and to [owner or operator] that the guarantor intends to provide alternate liability coverage as specified in section 33.1-24-02-40, as applicable, in the name of [owner or operator]. Within one hundred twenty days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the DEPARTMENT by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding. Guarantor agrees that within thirty days after being notified by the DEPARTMENT of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor, the guarantor shall establish alternate liability coverage as specified in section 33.1-24-02-40 in the name of [owner or operator], unless [owner or operator] has done so.

7. Guarantor reserves the right to modify this AGREEMENT to take into account amendment or modification of the liability requirements set by section 33.1-24-02-40, provided that such modification shall become effective only if the DEPARTMENT does not disapprove the modification within thirty days of receipt of notification of the modification.

8. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of section 33.1-24-02-40 for the above-listed facility(ies), except as provided in paragraph 10 of this AGREEMENT.

9. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

10. Guarantor may terminate this guarantee by sending notice by certified mail to the DEPARTMENT and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the DEPARTMENT approves, alternate liability coverage complying with section 33.1-24-02-40.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee one hundred twenty days following receipt of notification, through certified mail, by the DEPARTMENT and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [principal's] facility should be paid in the amount of \$.

[Signatures]

Principal .

(Notary) Date .

[Signatures] .

Claimant(s) .

(Notary) Date .

(b) A valid final court order establishing a judgment against the principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in subdivision b of subsection 7 of section 33.1-24-02-42 as such regulations were constituted on the date shown immediately below.

Effective date: _____.

[Name of guarantor] _____.

[Authorized signature for guarantor] _____.

[Name of person signing] _____.

[Title of person signing] _____.

Signature of witness or notary: _____.

8. A hazardous waste facility liability endorsement as required in section 33.1-24-02-40 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS SECONDARY MATERIAL RECLAMATION/INTERMEDIATE FACILITY LIABILITY ENDORSEMENT

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under North Dakota Administrative Code section 33.1-24-02-40. The coverage applies at [list identification number (if any issued), name and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the insurer's liability], exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy to which this endorsement is attached.

(b) The insurer is liable for the payment of amounts within any deductible applicable to this policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 6 of North Dakota Administrative Code section 33.1-24-02-40.

(c) When requested by the DEPARTMENT, the insurer agrees to furnish to the DEPARTMENT a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the facility, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the DEPARTMENT.

(e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of thirty days after a copy of such written notice is received by the DEPARTMENT, as evidenced by the return receipt.

Attached to and forming part of policy number _____ issued by [name of insurer], herein called the insurer of [address of insurer] to [name of insured] of [address] this _____ day of _____, 20____. The effective date of said policy is _____ day of _____, 20____.

I hereby certify that the wording of this endorsement is identical to the wording specified in subsection 8 of North Dakota Administrative Code section 33.1-24-02-42 as such rule was constituted on the date first above written, and that the insurer is

licensed to transact the business of insurance in the state of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of insurer]

[Type name]

[Title], authorized representative of [name of insurer]

[Address of representative]

9. A certificate of liability insurance as required in section 33.1-24-02-40 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS SECONDARY MATERIAL RECLAMATION/INTERMEDIATE FACILITY
CERTIFICATE OF LIABILITY INSURANCE

1. [Name of insurer], (the "insurer") of [address of insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16 and the financial assurance condition of subparagraph f of paragraph 6 of subdivision y of subsection 1 of section 33.1-24-02-04. The coverage applies at [list identification number (if any issued), name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date]. The effective date of said policy is [date].

2. The insurer further certifies the following with respect to the insurance described in paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy.

(b) The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in North Dakota Administrative Code section 33.1-24-02-40.

(c) When requested by the DEPARTMENT, the insurer agrees to furnish to the DEPARTMENT a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice, and only after the expiration of sixty days after a copy of such written notice is received by the DEPARTMENT.

(e) Any other termination of the insurance will be effective only upon written notice, and only after the expiration of thirty days after a copy of such written notice is received by the DEPARTMENT, as evidenced by the return receipt.

I hereby certify that the wording of this instrument is identical to the wording specified in subsection 9 of North Dakota Administrative Code section 33.1-24-02-42, as such regulation was constituted on the date first above written, and that the insurer is licensed to transact the business of insurance, in the state of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of insurer]

[Type name]

[Title], authorized representative of [name of insurer]

[Address of representative]

10. A letter of credit, as specified in subsection 8 of section 33.1-24-02-40, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

IRREVOCABLE STANDBY LETTER of CREDIT

Name and Address of Issuing Institution

North Dakota Department of Environmental Quality

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ["any and all third-party liability claimants" or insert name of TRUSTEE of the standby trust fund], at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] United States dollars \$ _____ per occurrence and the annual aggregate amount of [in words] United States dollars \$ _____, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] United States dollars \$ per occurrence, and the annual aggregate amount of [in words] United States dollars \$ _____, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. _____, and [insert the following language if the letter of credit is being used without a standby trust fund]: (1) a signed certificate reading as follows:

Certificate of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's] facility should be paid in the amount of \$[____]. We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs 1 and 2.

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody, or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures] .

GRANTOR .

[Signatures] .

Claimant(s) .

or (2) a valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR's facility or group of facilities.]

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify you, the DEPARTMENT, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess"] coverage.

We certify that the wording of this letter of credit is identical to the wording specified in subsection 10 of section 33.1-24-02-42 as such regulations were constituted on the date shown immediately below. [Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits published and copyrighted by the International Chamber of Commerce" or "the Uniform Commercial Code"].

11. A surety bond, as specified in subsection 9 of section 33.1-24-02-40, must be worded as follows: except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PAYMENT BOND

Surety Bond No. [Insert number]

Parties [Insert name and address of owner or operator], principal, incorporated in [Insert state of incorporation] of [Insert city and state of principal place of business] and [Insert name and address of surety company(ies)], surety company(ies), of [Insert surety(ies) place of business].

Identification number (if any issued), name, and address for each facility guaranteed by this bond:

	<u>Sudden Accidental Occurrences</u>	<u>Nonsudden Accidental Occurrences</u>
<u>Penal Sum Per Occurrence</u>	<u>[Insert Amount]</u>	<u>[Insert Amount]</u>
<u>Annual Aggregate</u>	<u>[Insert Amount]</u>	<u>[Insert Amount]</u>

Purpose: This is an AGREEMENT between the surety(ies) and the principal under which the surety(ies), its(their) successors and assignees, agree to be responsible for the payment of claims against the principal for bodily injury and/or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

- (1) Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.
- (2) Rules and regulations of the United States environmental protection agency (EPA), particularly 40 CFR parts 264, 265, and Subpart H of 40 CFR part 261 (if applicable).
- (3) Rules and regulations of the North Dakota Department of Environmental Quality (Department), particularly sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-819, subsection 5 of section 33.1-24-06-16, and sections

33.1-24-02-33 through 33.1-24-02-42 of the North Dakota Administrative Code (if applicable).

Conditions:

(1) The principal is subject to the applicable governing provisions that require the principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

(2) This bond assures that the principal will satisfy valid third-party liability claims, as described in condition 1.

(3) If the principal fails to satisfy a valid third-party liability claim, as described above, the surety(ies) becomes liable on this bond obligation.

(4) The surety(ies) shall satisfy a third-party liability claim only upon the receipt of one of the following documents:

(a) Certification from the principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert name of principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [principal's] facility should be paid in the amount of \$[_____].

[Signature]

Principal

[Notary] Date

[Signature(s)]

Claimant(s)

[Notary] Date

(b) A valid final court order establishing a judgment against the principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert "primary" or "excess"] coverage.

(6) The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the surety(ies) furnish(es) notice to the DEPARTMENT forthwith of all claims filed and payments made by the surety(ies) under this bond.

(7) The surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the principal and the DEPARTMENT provided, however, the cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by the principal and the DEPARTMENT, as evidenced by the return receipt.

(8) The principal may terminate this bond by sending written notice to the surety(ies) and to the DEPARTMENT.

(9) The surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

(10) This bond is effective from [insert date] (12:01 a.m., standard time, at the address of the principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the principal and surety(ies) have executed this bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection 11 of section 33.1-24-02-42, as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

CORPORATE SURETY(IES)

[Name and address]

State of incorporation: _____

Liability limit: \$ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ _____

12. Trust agreement.

- a. A trust agreement, as specified in subsection 10 of section 33.1-24-02-40, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

TRUST AGREEMENT, the "AGREEMENT," entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation", "partnership", "association", or "proprietorship"], the GRANTOR", and [name of corporate TRUSTEE], [insert, "incorporated in the state of _____" or "a national bank"], the "TRUSTEE".

Whereas, the DEPARTMENT has established certain regulations applicable to the GRANTOR, requiring that an owner or operator must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the GRANTOR has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the GRANTOR, acting through its duly authorized officers, has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT, and the TRUSTEE is willing to act as TRUSTEE.

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

- (a) The term "GRANTOR" means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.
- (b) The term "TRUSTEE" means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities. This AGREEMENT pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the identification number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a trust fund, hereinafter the "FUND", for the benefit of any and all third parties injured or damaged by [sudden or nonsudden, or both] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amount of \$ _____ [up to \$1 million] per occurrence and \$ _____ [up to \$2 million] annual aggregate for sudden accidental occurrences and \$ _____ [up to \$3 million] per occurrence and \$ _____ [up to \$6 million] annual aggregate for nonsudden occurrences, except that the FUND is not established for the benefit of third parties for the following:

- (a) Bodily injury or property damage for which [insert GRANTOR] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert GRANTOR] would be obligated to pay in the absence of the contract or agreement.
- (b) Any obligation of [insert GRANTOR] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.
- (c) Bodily injury to:
- (1) An employee of [insert GRANTOR] arising from, and in the course of, employment by [insert GRANTOR]; or
- (2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert GRANTOR].

This exclusion applies:

- (A) Whether [insert GRANTOR] may be liable as an employer or in any other capacity; and
- (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).
- (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.
- (e) Property damage to:

- (1) Any property owned, rented, or occupied by [insert GRANTOR];
- (2) Premises that are sold, given away, or abandoned by [insert GRANTOR] if the property damage arises out of any part of those premises;
- (3) Property loaned to [insert GRANTOR];
- (4) Personal property in the care, custody, or control of [insert GRANTOR];
- (5) That particular part of real property on which [insert GRANTOR] or any contractors or subcontractors working directly or indirectly on behalf of [insert GRANTOR] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the FUND shall be considered [insert "primary" or "excess"] coverage.

The FUND is established initially as consisting of the property, which is acceptable to the TRUSTEE, described in schedule B attached hereto. Such property and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND shall be held by the TRUSTEE, IN TRUST, as hereinafter provided. The TRUSTEE shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR, any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payment for Bodily Injury or Property Damage. The TRUSTEE shall satisfy a third-party liability claim by making payments from the FUND only upon receipt of one of the following documents:

- (a) Certification from the GRANTOR and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert GRANTOR] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [GRANTOR's] facility or group of facilities should be paid in the amount of \$[_____].

[Signatures]

GRANTOR

[Signatures]

Claimant(s)

- (b) A valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR's facility or group of facilities.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND shall consist of cash or securities acceptable to the TRUSTEE.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the GRANTOR

may communicate in writing to the TRUSTEE from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the TRUSTEE's duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the GRANTOR, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held unless they are securities or other obligations of the federal or a state government;
- (ii) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (iii) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without in any way limiting the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE shall at all times show that all such securities are part of the FUND;

- (d) To deposit any cash in the FUND in interest-bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate corporate capacity, or in any other banking institution affiliated with the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the FUND.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this trust, including fees for legal services rendered to the TRUSTEE, the compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements of the TRUSTEE shall be paid from the FUND.

Section 10. Annual Valuations. The TRUSTEE shall annually, at least thirty days prior to the anniversary date of establishment of the FUND, furnish to the GRANTOR and to the DEPARTMENT a statement confirming the value of the trust. Any securities in the FUND shall be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the FUND. The failure of the GRANTOR to object in writing to the TRUSTEE within ninety days after the statement has been furnished to the GRANTOR and the DEPARTMENT shall constitute a conclusively binding assent by the GRANTOR barring the GRANTOR from asserting any claim or liability against the TRUSTEE with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR with respect to any question arising as to the construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. TRUSTEE Compensation. The TRUSTEE shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 13. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement shall not be effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE's acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the trust in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the TRUSTEE. All orders, requests, and instructions by the GRANTOR to the TRUSTEE shall be in writing, signed by such persons as are designated in the attached exhibit A or such other designees as the GRANTOR may designate by amendments to exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR's orders, requests, and instructions. All orders, requests, and instructions by the DEPARTMENT to the TRUSTEE shall be in writing, signed by the DEPARTMENT, or its designees, and the TRUSTEE shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a

change or a termination of the authority of any person to act on behalf of the GRANTOR or DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR and/or the DEPARTMENT, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the TRUSTEE shall notify the GRANTOR of such payment and the amount(s) thereof within five working days. The GRANTOR shall, on or before the anniversary date of the establishment of the FUND following such notice, either make payments to the TRUSTEE in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the TRUSTEE that other financial assurance for liability coverage has been obtained equaling the amount necessary to return the trust to its value prior to the payment of claims. If the GRANTOR does not either make payments to the TRUSTEE or provide the TRUSTEE with such proof, the TRUSTEE shall within ten working days after the anniversary date of the establishment of the FUND provide a written notice of nonpayment to the DEPARTMENT.

Section 16. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT if the GRANTOR ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in Section 16, this trust shall be irrevocable and shall continue until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE, and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the GRANTOR. The DEPARTMENT will agree to termination of the trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The TRUSTEE shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the GRANTOR or the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE shall be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 19. Choice of Law. This AGREEMENT shall be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 20. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT shall not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subsection 12 of section 33.1-24-02-42, as such regulations were constituted on the date first above written.

[Signature of GRANTOR]

[Title]

Attest:

[Title]

[Seal]

[Signature of TRUSTEE]

Attest:

[Title]

[Seal]

b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a trust fund as specified in subsection 10 of section 33.1-24-02-40.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

13. Standby trust agreement.

a. A standby TRUST AGREEMENT, as specified in subsection 8 of section 33.1-24-02-40, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

STANDBY TRUST AGREEMENT

TRUST AGREEMENT, the "AGREEMENT", entered into as of [date] by and between [name of the owner or operator] a [name of a state] [insert "corporation", "partnership", "association", or "proprietorship"], the "GRANTOR," and [name of corporate TRUSTEE], [insert, "incorporated in the state of _____" or "a national bank"], the "TRUSTEE."

Whereas the DEPARTMENT has established certain regulations applicable to the GRANTOR, requiring that an owner or operator must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the GRANTOR has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the GRANTOR, acting through its duly authorized officers, has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT, and the TRUSTEE is willing to act as TRUSTEE.

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

- (a) The term "GRANTOR" means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.
- (b) The term "TRUSTEE" means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities. This AGREEMENT pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the identification number (if any issued), name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a standby trust fund, hereafter the "FUND", for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of \$ _____ [up to \$1 million] per occurrence and \$ _____ [up to \$2 million] annual aggregate for sudden accidental occurrences and \$ _____ [up to \$3 million] per occurrence and \$ _____ [up to \$6 million] annual aggregate for nonsudden occurrences, except that the FUND is not established for the benefit of third parties for the following:

- (a) Bodily injury or property damage for which [insert GRANTOR] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert GRANTOR] would be obligated to pay in the absence of the contract or agreement.
- (b) Any obligation of [insert GRANTOR] under a workers' compensation, disability benefits, or unemployment compensation law, or any similar law.
- (c) Bodily injury to:
- (1) An employee of [insert GRANTOR] arising from, and in the course of, employment by [insert GRANTOR]; or
- (2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert GRANTOR].

This exclusion applies:

- (A) Whether [insert GRANTOR] may be liable as an employer or in any other capacity; and
- (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).
- (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.
- (e) Property damage to:
- (1) Any property owned, rented, or occupied by [insert GRANTOR];
- (2) Premises that are sold, given away, or abandoned by [insert GRANTOR] if the property damage arises out of any part of those premises;

(3) Property loaned by [insert GRANTOR];

(4) Personal property in the care, custody, or control of [insert GRANTOR];

(5) That particular part of real property on which [insert GRANTOR] or any contractors or subcontractors working directly or indirectly on behalf of [insert GRANTOR] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the FUND shall be considered [insert "primary" or "excess"] coverage.

The FUND is established initially as consisting of the proceeds of the letter of credit deposited into the FUND. Such proceeds and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND shall be held by the TRUSTEE, IN TRUST, as hereinafter provided. The TRUSTEE shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR, any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payment for Bodily Injury or Property Damage. The TRUSTEE shall satisfy a third party liability claim by drawing on the letter of credit described in schedule B and by making payments from the FUND only upon receipt of one of the following documents:

(a) Certification from the GRANTOR and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert GRANTOR] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [GRANTOR's] facility should be paid in the amount of \$[] .

[Signature]

GRANTOR

[Signatures]

Claimant(s)

(b) A valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR's facility or group of facilities.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND shall consist of the proceeds from the letter of credit drawn upon by the TRUSTEE in accordance with the requirements of subsection 11 of section 33.1-24-02-42 and Section 4 of this AGREEMENT.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject, however, to the

provisions of this section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the TRUSTEE's duties with respect to the trust FUND solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the GRANTOR, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;
- (ii) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or a state government; and
- (iii) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common, commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without in any way limiting the powers and discretions conferred upon the TRUSTEE by other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE shall at all times show that all such securities are part of the FUND;

- (d) To deposit any cash in the FUND in interest-bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate corporate capacity, or in any other banking institution affiliated with the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the FUND. Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this trust, including fees for legal services rendered to the TRUSTEE, the compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements to the TRUSTEE shall be paid from the FUND.

Section 10. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR, with respect to any question arising as to the construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. TRUSTEE Compensation. The TRUSTEE shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 12. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement shall not be effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE's acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the trust in a writing sent to the GRANTOR, the DEPARTMENT and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 13. Instructions to the TRUSTEE. All orders, requests, certifications of valid claims, and instructions to the TRUSTEE shall be in writing, signed by such persons as are designated in the attached exhibit A or such other designees as the GRANTOR may designate by amendments to exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR's orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or the DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR and/or the DEPARTMENT, except as provided for herein.

Section 14. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT if the GRANTOR ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in Section 14, this trust shall be irrevocable and shall continue until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration

expenses, shall be paid to the GRANTOR. The DEPARTMENT will agree to termination of the trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and Indemnification. The TRUSTEE shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the GRANTOR and the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE shall be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 17. Choice of Law. This AGREEMENT shall be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 18. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT shall not affect the interpretation of the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subsection 13 of section 33.1-24-02-42 as such regulations were constituted on the date first above written.

[Signature of GRANTOR]

[Title]

Attest:

[Title]

[Seal]

[Signature of TRUSTEE]

Attest:

[Title]

[Seal]

b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a standby trust fund as specified in subsection 8 of section 33.1-24-02-40.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such

corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-43. [Reserved].

33.1-24-02-44. [Reserved].

33.1-24-02-45. [Reserved].

33.1-24-02-46. [Reserved].

33.1-24-02-47. [Reserved].

33.1-24-02-48. [Reserved].

33.1-24-02-49. [Reserved].

33.1-24-02-50. Applicability of requirements for use and management of containers.

Sections 33.1-24-02-50 through 33.1-24-02-59 apply to hazardous secondary materials excluded under the remanufacturing exclusion at subdivision z of subsection 1 of section 33.1-24-02-04 and stored in containers.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-51. Condition of containers.

If a container holding hazardous secondary material is not in good condition (for example, severe rusting, apparent structural defects) or if it begins to leak, the hazardous secondary material must be transferred from this container to a container that is in good condition or managed in some other way that complies with the requirements of this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-52. Compatibility of hazardous secondary materials with containers.

The container must be made of or lined with materials that will not react with, and are otherwise compatible with, the hazardous secondary material to be stored, so that the ability of the container to contain the material is not impaired.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-53. Management of containers.

1. A container holding hazardous secondary material must always be closed during storage, except when it is necessary to add or remove the hazardous secondary material.
2. A container holding hazardous secondary material must not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-54. [Reserved].

33.1-24-02-55. Containment.

1. Container storage areas must have a containment system that is designed and operated in accordance with subsection 2.
2. A containment system must be designed and operated as follows:
 - a. A base must underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;
 - b. The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;
 - c. The containment system must have sufficient capacity to contain ten percent of the volume of containers or the volume of the largest container, whichever is greater.
 - d. Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in subdivision c to contain any run-on which might enter the system; and
 - e. Spilled or leaked material and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-56. Special requirements for ignitable or reactive hazardous secondary material.

Containers holding ignitable or reactive hazardous secondary material must be located at least fifteen meters (fifty feet) from the facility's property line.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-57. Special requirements for incompatible materials.

1. Incompatible materials must not be placed in the same container.

2. Hazardous secondary material must not be placed in an unwashed container that previously held an incompatible material.
3. A storage container holding a hazardous secondary material that is incompatible with any other materials stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-58. [Reserved].

33.1-24-02-59. Air emission standards.

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a container in accordance with the applicable requirements of sections 33.1-24-02-170 through 33.1-24-02-214.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-60. Applicability of tank requirements.

1. Sections 33.1-24-02-60 through 33.1-24-02-74 apply to tank systems for storing or treating hazardous secondary material excluded under the remanufacturing exclusion at subdivision z of subsection 1 of section 33.1-24-02-04.
2. Tank systems, including sumps, as defined in section 33.1-24-01-04, which serve as part of a secondary containment system to collect or contain releases of hazardous secondary materials are exempted from the requirements in subsection 1 of section 33.1-24-02-63.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-61. Assessment of existing tank system's integrity.

1. Tank systems must meet the secondary containment requirements of section 33.1-24-02-63, or the remanufacturer or other person that handles the hazardous secondary material must determine that the tank system is not leaking or is unfit for use. Except as provided in subsection 3, a written assessment reviewed and certified by a qualified professional engineer must be kept on file at the remanufacturer's facility or other facility that stores or treats the hazardous secondary material that attests to the tank system's integrity.
2. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the materials to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:
 - a. Design standards, if available, according to which the tank and ancillary equipment were constructed;
 - b. Hazardous characteristics of the materials that have been and will be handled;
 - c. Existing corrosion protection measures;

- d. Documented age of the tank system, if available (otherwise, an estimate of the age); and
- e. Results of a leak test, internal inspection, or other tank integrity examination such that:

- (1) For nonenterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects; and
- (2) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination that is certified by a qualified professional engineer that addresses cracks, leaks, corrosion, and erosion.

[Note: The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.]

- 3. If, as a result of the assessment conducted in accordance with subsection 1, a tank system is found to be leaking or unfit for use, the remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements of section 33.1-24-02-66.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-62. [Reserved].

33.1-24-02-63. Containment and detection of releases.

- 1. Secondary containment systems must be:
 - a. Designed, installed, and operated to prevent any migration of materials or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
 - b. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

[Note to subsection 1: If the collected material is a hazardous waste under this chapter, it is subject to management as a hazardous waste in accordance with all applicable requirements of chapters 33.1-24-03 and 33.1-24-04, sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-929 and subsection 5 of section 33.1-24-06-16. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a publicly owned treatment works, it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR part 302.]

- 2. To meet the requirements of subsection 1, secondary containment systems must be at a minimum:
 - a. Constructed of or lined with materials that are compatible with the materials to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical

contact with the material to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic).

b. Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

c. Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous secondary material or accumulated liquid in the secondary containment system at the earliest practicable time; and

d. Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked material and accumulated precipitation must be removed from the secondary containment system within twenty-four hours, or in as timely a manner as is possible to prevent harm to human health and the environment.

3. Secondary containment for tanks must include one or more of the following devices:

a. A liner (external to the tank);

b. A vault; or

c. A double-walled tank

4. In addition to the requirements of subsections 1, 2 and 3, secondary containment systems must satisfy the following requirements:

a. External liner systems must be:

(1) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;

(2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five year, twenty-four hour rainfall event.

(3) Free of cracks or gaps; and

(4) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the material if the material is released from the tanks (for example, capable of preventing lateral as well as vertical migration of the material).

b. Vault systems must be:

(1) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;

(2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional twenty-four hour rainfall event;

(3) Constructed with chemical-resistant water stops in place at all joints (if any);

- (4) Provided with an impermeable interior coating or lining that is compatible with the stored material and that will prevent migration of material into the concrete;
- (5) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the material being stored or treated is ignitable or reactive; and
- (6) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

c. Double-walled tanks must be:

- (1) Designed as an integral structure (for example, an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;
- (2) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and
- (3) Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four hours, or at the earliest practicable time.

[Note to subdivision c: The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.]

5. [Reserved]

6. Ancillary equipment must be provided with secondary containment (for example, trench, jacketing, double-walled piping) that meets the requirements of subsections 1 and 2 except for:

- a. Above-ground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;
- b. Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;
- c. Sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks on a daily basis; and
- d. Pressurized aboveground piping systems with automatic shut-off devices (for example, excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-64. General operating requirements.

1. Hazardous secondary materials or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.
2. The remanufacturer or other person that stores or treats the hazardous secondary material must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

- a. Spill prevention controls (for example, check valves, dry disconnect couplings);
 - b. Overfill prevention controls (for example, level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
 - c. Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
3. The remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements of section 33.1-24-02-66 if a leak or spill occurs in the tank system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-65. [Reserved].

33.1-24-02-66. Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the remanufacturer or other person that stores or treats the hazardous secondary material shall satisfy the following requirements:

1. Cessation of use; prevent flow or addition of materials. The remanufacturer or other person that stores or treats the hazardous secondary material immediately shall stop the flow of hazardous secondary material into the tank system or secondary containment system and inspect the system to determine the cause of the release.
2. Removal of material from tank system or secondary containment system.
 - a. If the release was from the tank system, the remanufacturer or other person that stores or treats the hazardous secondary material, within twenty-four hours after detection of the leak or, if the remanufacturer or other person that stores or treats the hazardous secondary material demonstrates that it is not possible, at the earliest practicable time, shall remove as much of the material as is necessary to prevent further release of hazardous secondary material to the environment and to allow inspection and repair of the tank system to be performed.
 - b. If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.
3. Containment of visible releases to the environment. The remanufacturer or other person that stores or treats the hazardous secondary material immediately shall conduct a visual inspection of the release and, based upon that inspection:
 - a. Prevent further migration of the leak or spill to soils or surface water; and
 - b. Remove, and properly dispose of, any visible contamination of the soil or surface water.
4. Notifications, reports.
 - a. Any release to the environment, except as provided in subdivision b, must be reported to the department within twenty-four hours of its detection. The release should also be reported pursuant to 40 CFR part 302.

b. A leak or spill of hazardous secondary material is exempted from the requirements of this subsection if it is:

(1) Less than or equal to a quantity of one pound, and

(2) Immediately contained and cleaned up.

c. Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the department:

(1) Likely route of migration of the release;

(2) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(3) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the department as soon as they become available.

(4) Proximity to downgradient drinking water, surface water, and populated areas; and

(5) Description of response actions taken or planned.

5. Provision of secondary containment, repair, or closure.

a. Unless the remanufacturer or other person that stores or treats the hazardous secondary material satisfies the requirements of subdivisions b through d, the tank system must cease to operate under the remanufacturing exclusion at paragraph z of subsection 1 of section 33.1-24-02-04.

b. If the cause of the release was a spill that has not damaged the integrity of the system, the remanufacturer or other person that stores or treats the hazardous secondary material may return the system to service as soon as the released material is removed and repairs, if necessary, are made.

c. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

d. If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the remanufacturer or other person that stores or treats the hazardous secondary material shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of section 33.1-24-02-63 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of subsection 6 are satisfied. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (for example, the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with section 33.1-24-02-63 prior to being returned to use.

6. Certification of major repairs. If the remanufacturer or other person that stores or treats the hazardous secondary material has repaired a tank system in accordance with subsection 5, and

the repair has been extensive (for example, installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the remanufacturer or other person that stores or treats the hazardous secondary material has obtained a certification by a qualified professional engineer that the repaired system is capable of handling hazardous secondary materials without release for the intended life of the system. This certification must be kept on file at the facility and maintained until closure of the facility.

[Note: 40 CFR part 302 may require the owner or operator to notify the national response center of certain releases.]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-67. Termination of remanufacturing exclusion.

Hazardous secondary material stored in units more than ninety days after the unit ceases to operate under the remanufacturing exclusion at paragraph z of subsection 1 of section 33.1-24-02-04 or otherwise ceases to be operated for manufacturing, or for storage of a product or a raw material, then becomes subject to regulation as hazardous waste under chapters 33.1-24-02 through 33.1-24-04, 33.1-24-06, 33.1-24-07, sections 33.1-24-05-01 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-929 and subsection 5 of section 33.1-24-06-16, as applicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-68. Special requirements for ignitable or reactive materials.

1. Ignitable or reactive material must not be placed in tank systems, unless the material is stored or treated in such a way that it is protected from any material or conditions that may cause the material to ignite or react.
2. The remanufacturer or other person that stores or treats hazardous secondary material that is ignitable or reactive shall store or treat the hazardous secondary material in a tank that is in compliance with the requirements for the maintenance of protective distances between the material management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), incorporated by reference, see section 33.1-24-01-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-69. Special requirements for incompatible materials.

1. Incompatible materials must not be placed in the same tank system.
2. Hazardous secondary material must not be placed in a tank system that has not been decontaminated and which previously held an incompatible material.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-70. Air emission standards.

The remanufacturer or other person that stores or treats the hazardous secondary material shall manage all hazardous secondary material placed in a tank in accordance with the applicable requirements of sections 33.1-24-02-170 through 33.1-24-02-214.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-71. [Reserved].

33.1-24-02-72. [Reserved].

33.1-24-02-73. [Reserved].

33.1-24-02-74. [Reserved].

33.1-24-02-75. [Reserved].

33.1-24-02-76. [Reserved].

33.1-24-02-77. [Reserved].

33.1-24-02-78. [Reserved].

33.1-24-02-79. [Reserved].

33.1-24-02-80. [Reserved].

33.1-24-02-81. [Reserved].

33.1-24-02-82. [Reserved].

33.1-24-02-83. [Reserved].

33.1-24-02-84. [Reserved].

33.1-24-02-85. [Reserved].

33.1-24-02-86. [Reserved].

33.1-24-02-87. [Reserved].

33.1-24-02-88. [Reserved].

33.1-24-02-89. [Reserved].

33.1-24-02-90. [Reserved].

33.1-24-02-91. [Reserved].

33.1-24-02-92. [Reserved].

33.1-24-02-93. [Reserved].

33.1-24-02-94. [Reserved].

33.1-24-02-95. [Reserved].

33.1-24-02-96. [Reserved].

33.1-24-02-97. [Reserved].

33.1-24-02-98. [Reserved].

33.1-24-02-99. [Reserved].

33.1-24-02-100. [Reserved].

33.1-24-02-101. [Reserved].

33.1-24-02-102. [Reserved].

33.1-24-02-103. [Reserved].

33.1-24-02-104. [Reserved].

33.1-24-02-105. [Reserved].

33.1-24-02-106. [Reserved].

33.1-24-02-107. [Reserved].

33.1-24-02-108. [Reserved].

33.1-24-02-109. [Reserved].

33.1-24-02-110. [Reserved].

33.1-24-02-111. [Reserved].

33.1-24-02-112. [Reserved].

33.1-24-02-113. [Reserved].

33.1-24-02-114. [Reserved].

33.1-24-02-115. [Reserved].

33.1-24-02-116. [Reserved].

33.1-24-02-117. [Reserved].

33.1-24-02-118. [Reserved].

33.1-24-02-119. [Reserved].

33.1-24-02-120. Applicability of emergency preparedness and response for management of excluded hazardous secondary materials.

The requirements of sections 33.1-24-02-120 through 33.1-24-02-129 apply to those areas of an entity managing hazardous secondary materials excluded under subdivision x or y, or both, of subsection 1 of section 33.1-24-02-04 where hazardous secondary materials are generated or accumulated on site.

1. A generator of hazardous secondary material, or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10, which accumulates six thousand kilograms or less of hazardous secondary material at any time shall comply with sections 33.1-24-02-121 and 33.1-24-02-122.

2. A generator of hazardous secondary material, or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 which accumulates more than six thousand kilograms of hazardous secondary material at any time shall comply with sections 33.1-24-02-121 and 33.1-24-02-129.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-121. Preparedness and prevention.

1. Maintenance and operation of facility. Facilities generating or accumulating hazardous secondary material must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous secondary materials or hazardous secondary material constituents to air, soil, or surface water which could threaten human health or the environment.
2. Required equipment. All facilities generating or accumulating hazardous secondary material must be equipped with the following, unless none of the hazards posed by hazardous secondary material handled at the facility could require a particular kind of equipment specified below:
 - a. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
 - b. A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
 - c. Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
 - d. Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.
3. Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.
4. Access to communications or alarm system.
 - a. Whenever hazardous secondary material is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under subsection 2.
 - b. If there is ever just one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under subsection 2.
5. Required aisle space. The hazardous secondary material generator or intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 must maintain aisle space to allow the unobstructed movement of personnel, fire

protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

6. Arrangements with local authorities.

a. The hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 must attempt to make the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:

(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous secondary material handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

(2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

(3) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

(4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

b. Where state or local authorities decline to enter such arrangements, the hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 must document the refusal in the operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-122. Emergency procedures for facilities generating or accumulating of six thousand kilograms or less of hazardous secondary material.

A generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 which generates or accumulates six thousand kilograms or less of hazardous secondary material shall comply with the following requirements:

1. At all times there must be at least one employee either on the premises or on call (for example, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in subsection 4. This employee is the emergency coordinator.

2. The generator or intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 shall post the following information next to the telephone:

a. The name and telephone number of the emergency coordinator;

b. Location of fire extinguishers and spill control material, and, if present, fire alarm; and

c. The telephone number of the fire department, unless the facility has a direct alarm.

3. The generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

4. The emergency coordinator or the emergency coordinator's designee shall respond to any emergencies that arise. The applicable responses are as follows:

a. In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

b. In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

c. In the event of a fire, explosion, or other release that could threaten human health outside the facility or when the generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 has knowledge that a spill has reached surface water, the generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 immediately shall notify the national response center (using their 24-hour toll free number 800-424-8802). The report must include the following information:

(1) The name, address, and identification number of the facility;

(2) Date, time, and type of incident (for example, spill or fire);

(3) Quantity and type of hazardous waste involved in the incident;

(4) Extent of injuries, if any; and

(5) Estimated quantity and disposition of recovered materials, if any.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-123. [Reserved].

33.1-24-02-124. [Reserved].

33.1-24-02-125. [Reserved].

33.1-24-02-126. [Reserved].

33.1-24-02-127. [Reserved].

33.1-24-02-128. [Reserved].

33.1-24-02-129. Contingency planning and emergency procedures for facilities generating or accumulating more than six thousand kilograms of hazardous secondary material.

A generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 which generates or accumulates more than six thousand kilograms of hazardous secondary material shall comply with the following requirements:

1. Purpose and implementation of contingency plan.

- a. Each generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 which accumulates more than six thousand kilograms of hazardous secondary material shall have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water.
- b. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous secondary material or hazardous secondary material constituents that could threaten human health or the environment.

2. Content of contingency plan.

- a. The contingency plan must describe the actions facility personnel must take to comply with subsections 1 and 6 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous secondary material or hazardous secondary material constituents to air, soil, or surface water at the facility.
- b. If the generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 accumulating more than six thousand kilograms of hazardous secondary material has already prepared a spill prevention, control, and countermeasures plan in accordance with 40 CFR part 112, or some other emergency or contingency plan, the generator or an intermediate or reclamation facility need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this section. The hazardous secondary material generator or an intermediate or reclamation facility operating under a verified recycler variance under subsection 4 of section 33.1-24-01-10 may develop one contingency plan which meets all regulatory requirements. The department recommends the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to nonhazardous waste provisions in an integrated contingency plan, the changes do not trigger the need for a hazardous waste permit modification.
- c. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to subsection 6 of section 33.1-24-02-121.
- d. The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see subsection 5), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
- e. The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
- f. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the

primary routes could be blocked by releases of hazardous secondary material, hazardous waste or fires).

3. Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

a. Maintained at the facility; and

b. Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

4. Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

a. Applicable regulations are revised;

b. The plan fails in an emergency;

c. The facility changes in its design, construction, operation, maintenance, or other circumstances, in a way that materially increases the potential for fires, explosions, or releases of hazardous secondary material or hazardous secondary material constituents, or changes the response necessary in an emergency;

d. The list of emergency coordinators changes; or

e. The list of emergency equipment changes.

5. Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (for example, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan. The emergency coordinator's responsibilities are more fully spelled out in subsection 6. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of hazardous secondary materials handled by the facility, and type and complexity of the facility.

6. Emergency procedures.

a. Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) immediately shall:

(1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate state or local agencies with designated response roles if their help is needed.

b. Whenever there is a release, fire, or explosion, the emergency coordinator immediately shall identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

c. Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment

must consider both direct and indirect effects of the release, fire, or explosion (for example, the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

d If the emergency coordinator determines the facility has had a release, fire, or explosion that could threaten human health, or the environment, outside the facility, the emergency coordinator shall report the emergency coordinator's findings as follows:

(1) If the emergency coordinator's assessment indicates evacuation of local areas may be advisable, the emergency coordinator immediately shall notify appropriate local authorities. The emergency coordinator shall be available to help appropriate officials decide whether local areas should be evacuated; and

(2) The emergency coordinator immediately shall notify either the government official designated as the onscene coordinator for that geographical area, or the national response center (using their twenty-four-hour toll free number 800-424-8802). The report must include:

(a) Name and telephone number of reporter;

(b) Name and address of facility;

(c) Time and type of incident (for example, release, fire);

(d) Name and quantity of materials involved, to the extent known;

(e) The extent of injuries, if any; and

(f) The possible hazards to human health, or the environment, outside the facility.

e. During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous secondary material at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released material, and removing or isolating containers.

f. If the facility stops operations in response to a fire, explosion or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

g. Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered secondary material, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. Unless the hazardous secondary material generator can demonstrate, in accordance with subsection 3 or 4 of section 33.1-24-02-03, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of chapters 33.1-24-03, 33.1-24-04 and subsection 5 of section 33.1-24-06-16.

h. The emergency coordinator shall ensure that, in the affected areas of the facility:

(1) No secondary material that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

i. The hazardous secondary material generator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, the hazardous secondary material generator shall submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the hazardous secondary material generator;

(2) Name, address, and telephone number of the facility;

(3) Date, time, and type of incident (for example, fire, explosion);

(4) Name and quantity of materials involved;

(5) The extent of injuries, if any;

(6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(7) Estimated quantity and disposition of recovered material that resulted from the incident.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-130. [Reserved].
33.1-24-02-131. [Reserved].
33.1-24-02-132. [Reserved].
33.1-24-02-133. [Reserved].
33.1-24-02-134. [Reserved].
33.1-24-02-135. [Reserved].
33.1-24-02-136. [Reserved].
33.1-24-02-137. [Reserved].
33.1-24-02-138. [Reserved].
33.1-24-02-139. [Reserved].
33.1-24-02-140. [Reserved].
33.1-24-02-141. [Reserved].
33.1-24-02-142. [Reserved].
33.1-24-02-143. [Reserved].
33.1-24-02-144. [Reserved].
33.1-24-02-145. [Reserved].
33.1-24-02-146. [Reserved].
33.1-24-02-147. [Reserved].
33.1-24-02-148. [Reserved].
33.1-24-02-149. [Reserved].
33.1-24-02-150. [Reserved].
33.1-24-02-151. [Reserved].
33.1-24-02-152. [Reserved].
33.1-24-02-153. [Reserved].
33.1-24-02-154. [Reserved].
33.1-24-02-155. [Reserved].
33.1-24-02-156. [Reserved].
33.1-24-02-157. [Reserved].
33.1-24-02-158. [Reserved].
33.1-24-02-159. [Reserved].

33.1-24-02-160. [Reserved].

33.1-24-02-161. [Reserved].

33.1-24-02-162. [Reserved].

33.1-24-02-163. [Reserved].

33.1-24-02-164. [Reserved].

33.1-24-02-165. [Reserved].

33.1-24-02-166. [Reserved].

33.1-24-02-167. [Reserved].

33.1-24-02-168. [Reserved].

33.1-24-02-169. [Reserved].

33.1-24-02-170. Applicability to air emission standards for process vents.

The requirements of sections 33.1-24-02-170 through 33.1-24-02-179 apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous secondary materials excluded under the remanufacturing exclusion at subdivision z of subsection 1 of section 33.1-24-02-04 with concentrations of at least ten parts per million weight, unless the process vents are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-171. Definitions.

As used in sections 33.1-24-02-170 through 33.1-24-02-179, all terms not defined in this section have the meaning given them in chapter 23.1-04, chapters 33.1-24-01 through 33.1-24-05 and section 33.1-24-05-401.

1. "Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by sections 33.1-24-02-170 through 33.1-24-02-179.
2. "Hazardous secondary material management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit for less than twenty-four hours is not a hazardous secondary material management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous secondary material management unit shutdowns.
3. "In gas or vapor service" means that the piece of equipment contains or contacts a hazardous secondary material stream that is in the gaseous state at operating conditions.

4. "In light liquid service" means that the piece of equipment contains or contacts a material stream where the vapor pressure of one or more of the organic components in the stream is greater than three-tenths kilopascals at twenty degrees Celsius, the total concentration of the pure organic components having a vapor pressure greater than three-tenths kilopascals at twenty degrees Celsius is equal to or greater than twenty percent by weight, and the fluid is a liquid at operating conditions.
5. "Malfunction" means any sudden failure of a control device or a hazardous secondary material management unit or failure of a hazardous secondary material management unit to operate in a normal or usual manner, so that organic emissions are increased.
6. "Open-ended valve or line" means any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous secondary material and one side open to the atmosphere, either directly or through open piping.
7. "Process vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (for example, distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.
8. "Sampling connection system" means an assembly of equipment within a process or material management unit used during periods of representative operation to take samples of the process or material fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.
9. "Startup" means the setting in operation of a hazardous secondary material management unit or control device for any purpose.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-172. Standards - Process vents.

1. The remanufacturer or other person that stores or treats hazardous secondary materials in hazardous secondary material management units with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous secondary material with organic concentrations of at least ten parts per million weight either shall:
 - a. Reduce total organic emissions from all affected process vents at the facility below one and four-tenths kilograms per hour (three pounds per hour) and two and eight-tenths megagrams per year (three and one-tenth tons per year), or
 - b. Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by ninety-five weight percent.
2. If the remanufacturer or other person that stores or treats the hazardous secondary material installs a closed-vent system and control device to comply with the provisions of subsection 1 the closed-vent system and control device must meet the requirements of section 33.1-24-02-173.
3. Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission

reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of subsection 3 of section 33.1-24-02-174.

4. When a remanufacturer or other person that stores or treats the hazardous secondary material and the department do not agree on determinations of vent emissions or emission reductions, or both, or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in subsection 3 of section 33.1-24-02-174 must be used to resolve the disagreement.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-173. Standards - Closed-vent systems and control devices.

1. Requirements for remanufacturers or other persons of closed-vent systems and control devices.

- a. The remanufacturer or other person that stores or treats the hazardous secondary materials in hazardous secondary material management units using closed-vent systems and control devices used to comply with provisions of sections 33.1-24-02-170 through 33.1-24-02-179 shall comply with the provisions of this section.

- b. [Reserved]

2. A control device involving vapor recovery (for example, a condenser or adsorber) must be designed and operated to recover the organic vapors vented to it with an efficiency of ninety-five weight percent or greater unless the total organic emission limits of subdivision a of subsection 1 of section 33.1-24-02-172 for all affected process vents can be attained at an efficiency less than ninety-five weight percent.

3. An enclosed combustion device (for example, a vapor incinerator, boiler, or process heater) must be designed and operated to reduce the organic emissions vented to it by ninety-five weight percent or greater; to achieve a total organic compound concentration of twenty parts per million volume, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to three percent oxygen; or to provide a minimum residence time of fifty hundredths seconds at a minimum temperature of seven hundred sixty degrees Celsius. If a boiler or process heater is used as the control device, the vent stream must be introduced into the flame zone of the boiler or process heater.

4. Flares.

- a. A flare must be designed for and operated with no visible emissions as determined by the methods specified in subdivision a of subsection 5, except for periods not to exceed a total of five minutes during any two consecutive hours.

- b. A flare must be operated with a flame present at all times, as determined by the methods specified in paragraph 3 of subdivision b of subsection 6.

- c. A flare may be used only if the net heating value of the gas being combusted is eleven and two-tenths mega joules per standard cubic meter at standard conditions (three hundred British thermal units per standard cubic foot at standard conditions) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is seven and forty-five hundredths mega joules per cubic meter at standard conditions (two hundred British thermal units per standard cubic foot at standard conditions) or greater if

the flare is nonassisted. The net heating value of the gas being combusted must be determined by the methods specified in subdivision b of subsection 5.

d. Steam-assisted or nonassisted flare.

- (1) A steam-assisted or nonassisted flare must be designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, less than eighteen and three-tenths meters per second (sixty feet per second), except as provided in paragraphs 2 and 3.
- (2) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, equal to or greater than eighteen and three-tenths meters per second (sixty feet per second) but less than one hundred twenty-two meters per second (four hundred feet per second) is allowed if the net heating value of the gas being combusted is greater than thirty seven and three-tenths mega joules per cubic meter at standard conditions (one thousand British thermal units per standard cubic foot at standard conditions).
- (3) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, less than the velocity, V_{max} , as determined by the method specified in subdivision d of subsection 5 and less than one hundred twenty-two meters per second (four hundred feet per second) is allowed.

e. An air-assisted flare must be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in subdivision e of subsection 5.

f. A flare used to comply with this section must be steam-assisted, air-assisted, or nonassisted.

5. Methods.

- a. Referenced Method 22 in 40 CFR part 60 must be used to determine the compliance of a flare with the visible emission provisions of sections 33.1-24-02-170 through 33.1-24-02-179. The observation period is two hours and shall be used according to Method 22.
- b. The net heating value of the gas being combusted in a flare must be calculated using the following equation:

$$H_T = K \left[\sum_{i=1}^n C_i H_i \right]$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20°C;

K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946–82, as incorporated by reference as specified in section 33.1-24-01-05; and

H_i = Net heat of combustion of sample component i, kcal/9 mol at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382–83, as incorporated by reference as specified in section 33.1-24-01-05, if published values are not available or cannot be calculated.

c. The actual exit velocity of a flare must be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

d. The maximum allowed velocity in m/s, V_{max}, for a flare complying with paragraph 3 of subdivision d of subsection 4 shall be determined by the following equation:

$$\log_{10}(V_{max}) = (H_T + 28.8)/31.7$$

where:

28.8 = Constant,

31.7 = Constant,

H_T = The net heating value as determined in subdivision b.

e. The maximum allowed velocity in m/s, V_{max}, for an air-assisted flare must be determined by the following equation:

$$V_{max} = 8.706 + 0.7084(H_T)$$

where:

8.706 = Constant,

0.7084 = Constant,

H_T = The net heating value as determined in subdivision b.

6. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

a. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor must be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

b. Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(1) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor must be installed at a location in the combustion chamber downstream of the combustion zone.

(2) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature at two locations and have an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. One temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(3) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(4) For a boiler or process heater having a design heat input capacity less than forty-four megawatts, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor must be installed at a location in the furnace downstream of the combustion zone.

(5) For a boiler or process heater having a design heat input capacity greater than or equal to forty-four megawatts, a monitoring device equipped with a continuous recorder to measure a parameter or parameters that indicates good combustion operating practices are being used.

(6) For a condenser, either:

(a) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(b) A temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor must be installed at a location in the exhaust vent stream from the condenser exit (for example, product side).

(7) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(a) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(b) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

c. Inspect the readings from each monitoring device required by subdivisions a and b at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

7. A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device

shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-02-175.

8. A remanufacturer or other person that stores or treats hazardous secondary material in a hazardous secondary material management unit using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

a. Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency must be daily or at an interval no greater than twenty percent of the time required to consume the total carbon working capacity established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-02-175, whichever is longer.

b. Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-02-175.

9. An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

10. A remanufacturer or other person that stores or treats hazardous secondary material at an affected facility seeking to comply with the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system shall develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

11. A closed-vent system must meet either of the following design requirements:

a. A closed-vent system must be designed to operate with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million volume above background as determined by the procedure in subsection 2 of section 33.1-24-02-174, and by visual inspections; or

b. A closed-vent system must be designed to operate at a pressure below atmospheric pressure. The system must be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

12. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

a. Each closed-vent system that is used to comply with subdivision a of subsection 11 must be inspected and monitored in accordance with the following requirements:

(1) An initial leak detection monitoring of the closed-vent system must be conducted by the remanufacturer or other person that stores or treats the hazardous secondary material on or before the date that the system becomes subject to this section. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor the closed-vent system components and connections using the procedures specified in subsection 2 of section 33.1-24-02-174 to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million volume above background.

(2) After initial leak detection monitoring required in paragraph 1, the remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system as follows:

(a) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (for example, a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) must be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The remanufacturer or other person that stores or treats the hazardous secondary material shall monitor a component or connection using the procedures specified in subsection 2 of section 33.1-24-02-174 to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (for example, a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (for example, a flange is unbolted).

(b) Closed-vent system components or connections other than those specified in subparagraph a must be monitored annually and at other times as requested by the department, except as provided for in subsection 15, using the procedures specified in subsection 2 of section 33.1-24-02-174 to demonstrate that the components or connections operate with no detectable emissions.

(3) If a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect or leak in accordance with the requirements of subdivision c.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33.1-24-02-175.

b. Each closed-vent system that is used to comply with subdivision b of subsection 11 must be inspected and monitored in accordance with the following requirements:

(1) The closed-vent system must be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include visible cracks, holes, or gaps in ductwork or piping or loose connections.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year.

(3) In the event that a defect or leak is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subdivision c.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33.1-24-02-175.

c. The remanufacturer or other person that stores or treats the hazardous secondary material shall repair all detected defects as follows:

(1) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than five hundred parts per million volume above background, must be controlled as soon as practicable, but not later than fifteen calendar days after the emission is detected, except as provided for in paragraph 3.

(2) A first attempt at repair must be made no later than five calendar days after the emission is detected.

(3) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment must be completed by the end of the next process unit shutdown.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the defect repair in accordance with the requirements specified in section 33.1-24-02-175.

13. Closed-vent systems and control devices used to comply with provisions of sections 33.1-24-02-170 through 33.1-24-02-179 must be operated at all times when emissions may be vented to them.

14. The owner or operator using a carbon adsorption system to control air pollutant emissions shall document all carbon that is a hazardous waste and which is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

a. Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(1) The owner or operator of the unit has been issued a final hazardous waste permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-300 through 33.1-24-05-309; or

(2) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of sections 33.1-24-02-170 through 33.1-24-02-179 and sections 33.1-24-02-200 through 33.1-24-02-214 or the applicable requirements of subsection 5 of section 33.1-24-06-16; or

(3) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

b. Incinerated in a hazardous waste incinerator for which the owner or operator either:

- (1) Has been issued a final hazardous waste permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-144 through 33.1-24-05-159; or
- (2) Has designed and operates the incinerator in accordance with the interim status requirements of subsection 5 of section 33.1-24-06-16.

c. Burned in a boiler or industrial furnace for which the owner or operator either:

- (1) Has been issued a final hazardous waste permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-525 through 33.1-24-05-549; or
- (2) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of sections 33.1-24-05-525 through 33.1-24-05-549.

15. Any components of a closed-vent system that are designated, as described in subdivision i of subsection 3 of section 33.1-24-02-175, as unsafe to monitor are exempt from the requirements of subparagraph b of paragraph 2 of subdivision a of subsection 12 if:

- a. The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system determines the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subparagraph b of paragraph 2 of subdivision a of subsection 12; and
- b. The remanufacturer or other person that stores or treats the hazardous secondary material in a hazardous secondary material management unit using a closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in subparagraph b of paragraph 2 of subdivision a of subsection 12 as frequently as practicable during safe-to-monitor times.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-174. Test methods and procedures.

- 1. Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 shall comply with the test methods and procedural requirements provided in this section.
- 2. When a closed-vent system is tested for compliance with no detectable emissions, as required in subsection 12 of section 33.1-24-02-173, the test must comply with the following requirements:
 - a. Monitoring must comply with Reference Method 21 in 40 CFR part 60.
 - b. The detection instrument must meet the performance criteria of Reference Method 21.
 - c. The instrument must be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
 - d. Calibration gases must be:
 - (1) Zero air (less than ten parts per million hydrocarbon in air).
 - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or n-hexane.

- e. The background level must be determined as set forth in Reference Method 21.
- f. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
- g. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred parts per million for determining compliance.

3. Performance tests to determine compliance with subsection 1 of section 33.1-24-02-172 and with the total organic compound concentration limit of subsection 3 of section 33.1-24-02-173 must comply with the following:

- a. Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices must be conducted and data reduced in accordance with the following reference methods and calculation procedures:

- (1) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.
- (2) Method 18 or Method 25A in 40 CFR part 60, appendix A, for organic content. If Method 25A is used, the organic hazardous air pollutant used as the calibration gas must be the single organic hazardous air pollutant representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least twenty times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.
- (3) Each performance test must consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average must be computed on a time-weighted basis.
- (4) Total organic mass flow rates must be determined by the following equation:

- (a) For sources utilizing Method 18.

$$E_h = Q_{2sd} \left\{ \sum_{i=1}^n C_i MW_i \right\} [0.0416][10^{-6}]$$

where:

E_h = Total organic mass flow rate, kg/h;

Q_{2sd} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10⁻⁶ = Conversion from ppm

(b) For sources utilizing Method 25A.

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

where:

E_h = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

C = Organic concentration in ppm, dry basis, as determined by Method 25A;

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10⁻⁶ = Conversion from ppm.

(5) The annual total organic emission rate must be determined by the following equation:

$$E_A = (E_h)(H)$$

where:

E_A = Total organic mass emission rate, kg/y;

E_h = Total organic mass flow rate for the process vent, kg/h;

H = Total annual hours of operations for the affected unit, h.

(6) Total organic emissions from all affected process vents at the facility must be determined by summing the hourly total organic mass emission rates (E_h as determined in paragraph 4) and by summing the annual total organic mass emission rates (E_A, as determined in paragraph 5) for all affected process vents at the facility.

b. The remanufacturer or other person that stores or treats the hazardous secondary material shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction must not constitute representative conditions for the purpose of a performance test.

c. The remanufacturer or other person that stores or treats the hazardous secondary material at an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for the test methods specified in subdivision a.

(2) Safe sampling platforms.

(3) Safe access to sampling platforms.

(4) Utilities for sampling and testing equipment.

d. For the purpose of making compliance determinations, the time-weighted average of the results of the three runs must apply. If a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the remanufacturer's or other person's that stores or treats the hazardous secondary material control, compliance, upon the department's approval, may be determined using the average of the results of the two other runs.

4. To show that a process vent associated with a hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of section 33.1-24-02-170 through 33.1-24-02-179, the remanufacturer or other person that stores or treats the hazardous secondary material shall make an initial determination that the time-weighted, annual average total organic concentration of the material managed by the hazardous secondary material management unit is less than ten parts per million weight using one of the following two methods:

a. Direct measurement of the organic concentration of the material using the following procedures:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall take a minimum of four grab samples of material for each material stream managed in the affected unit under process conditions expected to cause the maximum material organic concentration.

(2) For material generated onsite, the grab samples must be collected at a point before the material is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the material after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For material generated offsite, the grab samples must be collected at the inlet to the first material management unit that receives the material provided the material has been transferred to the facility in a closed system such as a tank truck and the material is not diluted or mixed with other material.

(3) Each sample must be analyzed and the total organic concentration of the sample must be computed using Method 9060A (as incorporated by reference in section 33.1-24-01-05) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," environmental protection agency Publication SW-846, or analyzed for its individual organic constituents.

(4) The arithmetic mean of the results of the analyses of the four samples applies for each material stream managed in the unit in determining the time-weighted, annual average total organic concentration of the material. The time-weighted average is to be calculated using the annual quantity of each material stream processed and the mean organic concentration of each material stream managed in the unit.

b. Using knowledge of the material to determine that its total organic concentration is less than ten parts per million weight. Documentation of the material determination is required. Examples of documentation that must be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct

measurement to generate a material stream having a total organic content less than ten parts per million weight, or prior speciation analysis results on the same material stream where it can also be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

5. The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous secondary materials with time-weighted, annual average total organic concentrations less than ten parts per million weight must be made as follows:

a. By the effective date that the facility becomes subject to the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 or by the date when the material is first managed in a hazardous secondary material management unit, whichever is later; and

b. For continuously generated material, annually; or

c. Whenever there is a change in the material being managed or a change in the process that generates or treats the material.

6. When a remanufacturer or other person that stores or treats the hazardous secondary material and the department do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous secondary material with organic concentrations of at least ten parts per million weight based on knowledge of the material, the dispute may be resolved by using direct measurement as specified at subdivision a of subsection 4.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-175. Recordkeeping requirements.

1. Applicability.

a. Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 shall comply with the recordkeeping requirements of this section.

b. A remanufacturer or other person that stores or treats the hazardous secondary material of more than one hazardous secondary material management unit subject to the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 may comply with the recordkeeping requirements for these hazardous secondary material management units in one recordkeeping system if the system identifies each record by each hazardous secondary material management unit.

2. The remanufacturer or other person that stores or treats the hazardous secondary material must keep the following records on-site:

a. [Reserved]

b. Up-to-date documentation of compliance with the process vent standards in section 33.1-24-02-172, including:

(1) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (for example, the total emissions for all affected vents at the

facility), and the approximate location within the facility of each affected unit (for example, identify the hazardous secondary material management units on a facility plot plan).

- (2) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (for example, temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action (for example, managing a material of different composition or increasing operating hours of affected hazardous secondary material management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

c. Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan must be developed and include:

- (1) A description of how it is determined that the planned test is going to be conducted when the hazardous secondary material management unit is operating at the highest load or capacity level reasonably expected to occur. This must include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

- (2) A detailed engineering description of the closed-vent system and control device including:

(a) Manufacturer's name and model number of control device.

(b) Type of control device.

(c) Dimensions of the control device.

(d) Capacity.

(e) Construction materials.

- (3) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

d. Documentation of compliance with section 33.1-24-02-173 must include the following information:

- (1) A list of all information references and sources used in preparing the documentation.

- (2) Records, including the dates, of each compliance test required by subsection 11 of section 33.1-24-02-173.

(3) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions", as incorporated by reference as specified in section 33.1-24-01-05, or other engineering texts acceptable to the department that present basic control device design information. Documentation provided by the control device manufacturer or vendor which describes the control device design in accordance with subparagraphs a through g may be used to comply with this requirement. The design analysis must address the vent stream characteristics and control device operation parameters as specified below.

(a) For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also must establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(b) For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also must establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(c) For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also must establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(d) For a flare, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also must consider the requirements specified in subsection 4 of section 33.1-24-02-173.

(e) For a condenser, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also must establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(f) For a carbon adsorption system such as a fixed-bed adsorber which regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also must establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling or drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(g) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also must establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design

carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(4) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous secondary material management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(5) A statement signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material certifying that the control device is designed to operate at an efficiency of ninety-five percent or greater unless the total organic concentration limit of subsection 1 of section 33.1-24-02-172 is achieved at an efficiency less than ninety-five weight percent or the total organic emission limits of subsection 1 of section 33.1-24-02-172 for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than ninety-five weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(6) If performance tests are used to demonstrate compliance, all test results.

3. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of sections 33.1-24-02-170 through 33.1-24-02-179 must be recorded and kept up to date at the facility. The information must include:

a. Description and date of each modification that is made to the closed-vent system or control device design.

b. Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with subdivisions a and b of subsection 6 of section 33.1-24-02-173.

c. Monitoring, operating, and inspection information required by subsections 6 through 11 of section 33.1-24-02-173.

d. Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(1) For a thermal vapor incinerator designed to operate with a minimum residence time of fifty-hundredths seconds at a minimum temperature of seven hundred sixty degrees Celsius, period when the combustion temperature is below seven hundred sixty degrees Celsius.

(2) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of ninety-five weight percent or greater, period when the combustion zone temperature is more than twenty-eight degrees Celsius below the design average combustion zone temperature established as a requirement of subparagraph a of paragraph 3 of subdivision d of subsection 2.

(3) For a catalytic vapor incinerator, period when:

(a) Temperature of the vent stream at the catalyst bed inlet is more than twenty-eight degrees Celsius below the average temperature of the inlet vent stream

established as a requirement of subparagraph b of paragraph 3 of subdivision d of subsection 2; or

(b) Temperature difference across the catalyst bed is less than eighty percent of the design average temperature difference established as a requirement of subparagraph b of paragraph 3 of subdivision d of subsection 2.

(4) For a boiler or process heater, period when:

(a) Flame zone temperature is more than twenty-eight degrees Celsius below the design average flame zone temperature established as a requirement of subparagraph c of paragraph 3 of subdivision d of subsection 2; or

(b) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of subparagraph c of paragraph 3 of subdivision d of subsection 2.

(5) For a flare, period when the pilot flame is not ignited.

(6) For a condenser that complies with subparagraph a of paragraph 6 of subdivision b of subsection 6 of section 33.1-24-02-173, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than twenty percent greater than the design outlet organic compound concentration level established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.

(7) For a condenser that complies with subparagraph b of paragraph 6 of subdivision b of subsection 6 of section 33.1-24-02-173, period when:

(a) Temperature of the exhaust vent stream from the condenser is more than six degrees Celsius above the design average exhaust vent stream temperature established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2; or

(b) Temperature of the coolant fluid exiting the condenser is more than six degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.

(8) For a carbon adsorption system such as a fixed-bed carbon adsorber which regenerates the carbon bed directly on-site in the control device and complies with subparagraph a of paragraph 7 of subdivision b of subsection 6 of section 33.1-24-02-173, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.

(9) For a carbon adsorption system such as a fixed-bed carbon adsorber which regenerates the carbon bed directly on-site in the control device and complies with subparagraph b of paragraph 7 of subdivision b of subsection 6 of section 33.1-24-02-173, period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.

e. Explanation for each period recorded under subdivision d of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

f. For a carbon adsorption system operated subject to requirements specified in subsection 7 or subdivision b of subsection 8 of section 33.1-24-02-173, date when existing carbon in the control device is replaced with fresh carbon.

g. For a carbon adsorption system operated subject to requirements specified in subdivision a of subsection 8 of section 33.1-24-02-173, a log that records:

(1) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(2) Date when existing carbon in the control device is replaced with fresh carbon.

h. Date of each control device startup and shutdown.

i. A remanufacturer or other person that stores or treats the hazardous secondary material designating any components of a closed-vent system as unsafe to monitor pursuant to subsection 15 of section 33.1-24-02-173 shall record in a log that is kept at the facility the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of subsection 15 of section 33.1-24-02-173, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

j. When each leak is detected as specified in subsection 12 of section 33.1-24-02-173, the following information must be recorded:

(1) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(2) The date the leak was detected and the date of first attempt to repair the leak.

(3) The date of successful repair of the leak.

(4) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.

(a) The remanufacturer or other person that stores or treats the hazardous secondary material may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(b) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.

4. Records of the monitoring, operating, and inspection information required by subdivisions c through j of subsection 3 must be maintained by the owner or operator for at least three years following the date of each occurrence, measurement, maintenance, corrective action, or record.

5. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
6. Up to date information and data used to determine whether or not a process vent is subject to the requirements in section 33.1-24-02-172 including supporting documentation as required by subdivision b of subsection 4 of section 33.1-24-02-174 when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used, must be recorded in a log that is kept at the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-176. [Reserved].

33.1-24-02-177. [Reserved].

33.1-24-02-178. [Reserved].

33.1-24-02-179. [Reserved].

33.1-24-02-180. Applicability to air emission standards for equipment leaks.

The requirements of sections 33.1-24-02-180 through 33.1-24-02-199 apply to equipment that contains hazardous secondary materials excluded under the remanufacturing exclusion at subdivision z of subsection 1 of section 33.1-24-02-04, unless the equipment operations are subject to the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-181. Definitions.

As used in sections 33.1-24-02-180 through 33.1-24-02-199, all terms not defined herein have the meaning given them in chapter 23.1-04, chapters 33.1-24-01 through 33.1-24-05 and section 33.1-24-05-401, as amended at section 33.1-24-02-171.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-182. Standards - Pumps in light liquid service.

1. Timeframe.

- a. Each pump in light liquid service must be monitored monthly to detect leaks by the methods specified in subsection 2 of section 33.1-24-02-193, except as provided in subsections 4, 5 and 6.
- b. Each pump in light liquid service must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

2. Indicators.

a. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.

b. If there are indications of liquids dripping from the pump seal, a leak is detected.

3. Response.

a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-02-189.

b. A first attempt at repair (for example, tightening the packing gland) must be made no later than five calendar days after each leak is detected.

4. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of subsection 1, provided the following requirements are met:

a. Each dual mechanical seal system must be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure;

(2) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of section 33.1-24-02-190; or

(3) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to the atmosphere.

b. The barrier fluid system must not be a hazardous secondary material with organic concentrations ten percent or greater by weight.

c. Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

d. Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

e. Checks.

(1) Each sensor as described in subdivision c of subsection 4 must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

f. Leaks.

(1) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph 2 of subdivision e of subsection 4, a leak is detected.

(2) When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-02-189.

(3) A first attempt at repair (for example, relapping the seal) must be made no later than five calendar days after each leak is detected.

5. Any pump that is designated, as described in subdivision b of subsection 7 of section 33.1-24-02-194, for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, is exempt from the requirements of subsections 1, 3 and 4 if the pump meets the following requirements:

a. Must have no externally actuated shaft penetrating the pump housing.

b. Must operate with no detectable emissions as indicated by an instrument reading of less than five hundred parts per million above background as measured by the methods specified in subsection 3 of section 33.1-24-02-193.

c. Must be tested for compliance with subdivision b initially upon designation, annually, and at other times as requested by the department.

6. If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of section 33.1-24-02-190, it is exempt from the requirements of subsections 1 through 5.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-183. Standards - Compressors.

1. Each compressor must be equipped with a seal system that includes a barrier fluid system and which prevents leakage of total organic emissions to the atmosphere, except as provided in subsections 8 and 9.

2. Each compressor seal system as required in subsection 1 must be:

a. Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure;

b. Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of section 33.1-24-02-190; or

c. Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to atmosphere.

3. The barrier fluid must not be a hazardous secondary material with organic concentrations ten percent or greater by weight.

4. Each barrier fluid system as described in subsections 1 through 3 must be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

5. Checks.

a. Each sensor as required in subsection 4 must be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

b. The remanufacturer or other person that stores or treats the hazardous secondary material shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

6. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion determined under subdivision b of subsection 5, a leak is detected.

7. Leaks.

a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-02-189.

b. A first attempt at repair (for example, tightening the packing gland) must be made no later than five calendar days after each leak is detected.

8. A compressor is exempt from the requirements of subsections 1 and 2 if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of section 33.1-24-02-190, except as provided in subsection 9.

9. Any compressor that is designated, as described in subdivision b of subsection 7 of section 33.1-24-02-194, for no detectable emissions as indicated by an instrument reading of less than five hundred parts per million above background is exempt from the requirements of subsections 1 through 8 if the compressor:

a. Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-02-193.

b. Is tested for compliance with subdivision a initially upon designation, annually, and at other times as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-184. Standards - Pressure relief devices in gas or vapor service.

1. Except during pressure releases, each pressure relief device in gas or vapor service must be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-02-193.

2. Pressure release.

a. After each pressure release, the pressure relief device must be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as soon as practicable, but no later than five calendar days after each pressure release, except as provided in section 33.1-24-02-189.

b. No later than five calendar days after the pressure release, the pressure relief device must be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-02-193.

3. Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in section 33.1-24-02-190 is exempt from the requirements of subsections 1 and 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-185. Standards - Sampling connection systems.

1. Each sampling connection system must be equipped with a closed-purge, closed-loop, or closed-vent system. This system must collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.
2. Each closed-purge, closed-loop, or closed-vent system as required in subsection 1 must meet one of the following requirements:
 - a. Return the purged process fluid directly to the process line;
 - b. Collect and recycle the purged process fluid; or
 - c. Be designed and operated to capture and transport all the purged process fluid to a material management unit that complies with the applicable requirements of sections 33.1-24-02-204 through 33.1-24-02-206 or a control device that complies with the requirements of section 33.1-24-02-190.
3. In-situ sampling systems and sampling systems without purges are exempt from the requirements of subsections 1 and 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-186. Standards - Open-ended valves or lines.

1. Requirements.
 - a. Each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve.
 - b. The cap, blind flange, plug, or second valve must seal the open end at all times except during operations requiring hazardous secondary material stream flow through the open-ended valve or line.
2. Each open-ended valve or line equipped with a second valve must be operated in a manner such that the valve on the hazardous secondary material stream end is closed before the second valve is closed.
3. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but must comply with subsection 1 at all other times.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-187. Standards - Valves in gas or vapor service or in light liquid service.

1. Each valve in gas or vapor or light liquid service must be monitored monthly to detect leaks by the methods specified in subsection 2 of section 33.1-24-02-193 and must comply with subsections 2 through 5, except as provided in subsections 6, 7, and 8, and sections 33.1-24-02-191 and 33.1-24-02-192.
2. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.
3. Timeframe.
 - a. Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.
 - b. If a leak is detected, the valve must be monitored monthly until a leak is not detected for two successive months.
4. Release.
 - a. When a leak is detected, it must be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except as provided in section 33.1-24-02-189.
 - b. A first attempt at repair must be made no later than five calendar days after each leak is detected.
5. First attempts at repair include the following best practices where practicable:
 - a. Tightening of bonnet bolts.
 - b. Replacement of bonnet bolts.
 - c. Tightening of packing gland nuts.
 - d. Injection of lubricant into lubricated packing.
6. Any valve that is designated, as described in subdivision b of subsection 7 of section 33.1-24-02-194, for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, is exempt from the requirements of subsection 1 if the valve:
 - a. Has no external actuating mechanism in contact with the hazardous secondary material stream.
 - b. Is operated with emissions less than five hundred parts per million above background as determined by the method specified in subsection 3 of section 33.1-24-02-193.
 - c. Is tested for compliance with subdivision b initially upon designation, annually, and at other times as requested by the department.
7. Any valve that is designated, as described in subdivision a of subsection 8 of section 33.1-24-02-194, as an unsafe-to-monitor valve is exempt from the requirements of subsection 1 if:
 - a. The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection 1.

b. The remanufacturer or other person that stores or treats the hazardous secondary material adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

8. Any valve that is designated, as described in subdivision b of subsection 8 of section 33.1-24-02-194, as a difficult-to-monitor valve is exempt from the requirements of subsection 1 if:

a. The remanufacturer or other person that stores or treats the hazardous secondary material determines that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface.

b. The hazardous secondary material management unit within which the valve is located was in operation before January 15, 2015.

c. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-188. Standards - Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.

1. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors must be monitored within five days by the method specified in subsection 2 of section 33.1-24-02-193 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

2. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.

3. Timeframe.

a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-02-189.

b. The first attempt at repair must be made no later than five calendar days after each leak is detected.

4. First attempts at repair include the best practices described under subsection 5 of section 33.1-24-02-187.

5. Any connector that is inaccessible or is ceramic or ceramic-lined (for example, porcelain, glass, or glass-lined) is exempt from the monitoring requirements of subsection 1 and from the recordkeeping requirements of section 33.1-24-02-194.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-189. Standards - Delay of repair.

1. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous secondary material management unit shutdown. In such a case, repair of this equipment must occur before the end of the next hazardous secondary material management unit shutdown.

2. Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous secondary material management unit and that does not continue to contain or contact hazardous secondary material with organic concentrations at least ten percent by weight.
3. Delay of repair for valves will be allowed if:
 - a. The remanufacturer or other person that stores or treats the hazardous secondary material determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.
 - b. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with section 33.1-24-02-190.
4. Delay of repair for pumps will be allowed if:
 - a. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.
 - b. Repair is completed as soon as practicable, but not later than six months after the leak was detected.
5. Delay of repair beyond a hazardous secondary material management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous secondary material management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous secondary material management unit shutdown will not be allowed unless the next hazardous secondary material management unit shutdown occurs sooner than six months after the first hazardous secondary material management unit shutdown.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-190. Standards - Closed-vent systems and control devices.

1. The remanufacturer or other person that stores or treats the hazardous secondary material in hazardous secondary material management units using closed-vent systems and control devices subject to sections 33.1-24-02-180 through 33.1-24-02-199 shall comply with the provisions of section 33.1-24-02-173.
2. For:
 - a. The remanufacturer or other person that stores or treats the hazardous secondary material at an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subpart on the effective date that the facility becomes subject to the provisions of sections 33.1-24-02-180 through 33.1-24-02-199 shall prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33.1-24-02-180 through 33.1-24-02-199 for installation and startup.
 - b. Any unit that begins operation after July 13, 2015, and is subject to the provisions of sections 33.1-24-02-180 through 33.1-24-02-199 when operation begins, must comply

with the rules immediately (for example, must have control devices installed and operating on startup of the affected unit); the thirty-month implementation schedule does not apply.

- c. The remanufacturer or other person that stores or treats the hazardous secondary material at any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to this subpart shall comply with all requirements of sections 33.1-24-02-180 through 33.1-24-02-199 as soon as practicable but no later than thirty months after the amendment's effective date. When control equipment required by sections 33.1-24-02-180 through 33.1-24-02-199 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: Specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of onsite installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of sections 33.1-24-02-180 through 33.1-24-02-199. The remanufacturer or other person that stores or treats the hazardous secondary material shall keep a copy of the implementation schedule at the facility.
- d. Remanufacturers or other persons that store or treat the hazardous secondary materials at facilities and units that become newly subject to the requirements of sections 33.1-24-02-180 through 33.1-24-02-199 after January 13, 2015, due to an action other than those described in subdivision c must comply with all applicable requirements immediately (for example, must have control devices installed and operating on the date the facility or unit becomes subject to sections 33.1-24-02-180 through 33.1-24-02-199); the thirty-month implementation schedule does not apply.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-191. Alternative standards for valves in gas or vapor service or in light liquid service - Percentage of valves allowed to leak.

1. A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of section 33.1-24-02-187 may elect to have all valves within a hazardous secondary material management unit comply with an alternative standard that allows no greater than two percent of the valves to leak.
2. The following requirements must be met if a remanufacturer or other person that stores or treats the hazardous secondary material decides to comply with the alternative standard of allowing two percent of valves to leak:
 - a. A performance test as specified in subsection 3 must be conducted initially upon designation, annually, and at other times requested by the department.
 - b. If a valve leak is detected, it must be repaired in accordance with subsections 4 and 5 of section 33.1-24-02-187.
3. Performance tests must be conducted in the following manner:
 - a. All valves subject to the requirements in section 33.1-24-02-187 within the hazardous secondary material management unit must be monitored within one week by the methods specified in subsection 2 of section 33.1-24-02-193.

- b. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.
- c. The leak percentage must be determined by dividing the number of valves subject to the requirements in section 33.1-24-02-187 for which leaks are detected by the total number of valves subject to the requirements in section 33.1-24-02-187 within the hazardous secondary material management unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-192. Alternative standards for valves in gas or vapor service or in light liquid service - Skip period leak detection and repair.

- 1. A remanufacturer or other person that stores or treats the hazardous secondary material subject to the requirements of section 33.1-24-02-187 may elect for all valves within a hazardous secondary material management unit to comply with one of the alternative work practices specified in subdivisions b and c of subsection 2.
- 2. Requirements.
 - a. A remanufacturer or other person that stores or treats the hazardous secondary material shall comply with the requirements for valves, as described in section 33.1-24-02-187, except as described in subdivisions b and c.
 - b. After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip one of the quarterly leak detection periods (for example, monitor for leaks once every six months) for the valves subject to the requirements in section 33.1-24-02-187.
 - c. After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, a remanufacturer or other person that stores or treats the hazardous secondary material may begin to skip three of the quarterly leak detection periods (for example, monitor for leaks once every year) for the valves subject to the requirements in section 33.1-24-02-187.
 - d. If the percentage of valves leaking is greater than two percent, the remanufacturer or other person that stores or treats the hazardous secondary material shall monitor monthly in compliance with the requirements in section 33.1-24-02-187, but may again elect to use this section after meeting the requirements of subdivision a of subsection 3 of section 33.1-24-02-187.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-193. Test methods and procedures.

- 1. Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of sections 33.1-24-02-180 through 33.1-24-02-199 shall comply with the test methods and procedures requirements provided in this section.
- 2. Leak detection monitoring, as required in sections 33.1-24-02-182 through 33.1-24-02-192, must comply with the following requirements:

- a. Monitoring must comply with Reference Method 21 in 40 CFR part 60.
- b. The detection instrument must meet the performance criteria of Reference Method 21.
- c. The instrument must be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
- d. Calibration gases must be:
 - (1) Zero air (less than ten parts per million of hydrocarbon in air).
 - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or nhexane.
- e. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

3. When equipment is tested for compliance with no detectable emissions, as required in subsection 5 of section 33.1-24-02-182, subsection 9 of section 33.1-24-02-183, 33.1-24-02-184, and subsection 6 of section 33.1-24-02-187, the test must comply with the following requirements:

- a. The requirements of subdivisions a through d of subsection 2 must apply.
- b. The background level must be determined as set forth in Reference Method 21.
- c. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
- d. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred parts per million for determining compliance.

4. A remanufacturer or other person that stores or treats the hazardous secondary material shall determine, for each piece of equipment, whether the equipment contains or contacts a hazardous secondary material with organic concentration that equals or exceeds ten percent by weight using the following:

- a. Methods described in American society for testing and materials Methods D 2267–88, E 169–87, E 168–88, E 260–85 (as incorporated by reference under section 33.1-24-01-05);
- b. Method 9060A (as incorporated by reference under section 33.1-24-01-05) of "Test Methods for Evaluating Solid Waste," environmental protection agency publication SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents; or
- c. Application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced. Documentation of a material determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the material is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than ten percent, or prior speciation analysis results on the same material stream where it can also

be documented that no process changes have occurred since that analysis that could affect the material total organic concentration.

5. If a remanufacturer or other person that stores or treats the hazardous secondary material determines that a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least ten percent by weight, the determination can be revised only after following the procedures in subdivision a or b of subsection 4.
6. When a remanufacturer or other person that stores or treats the hazardous secondary material and the department do not agree on whether a piece of equipment contains or contacts a hazardous secondary material with organic concentrations at least ten percent by weight, the procedures in subdivision a or b of subsection 4 can be used to resolve the dispute.
7. Samples used in determining the percent organic content must be representative of the highest total organic content hazardous secondary material that is expected to be contained in or contact the equipment.
8. To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by American society for testing and materials D-2879-86 (as incorporated by reference under section 33.1-24-01-05).
9. Performance tests to determine if a control device achieves ninety-five weight percent organic emission reduction must comply with the procedures of subdivisions a through d of subsection 3 of section 33.1-24-02-174.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-194. Recordkeeping requirements.

1. Remanufacturer or other person that stores or treats the hazardous secondary material.
 - a. Each remanufacturer or other person that stores or treats the hazardous secondary material subject to the provisions of sections 33.1-24-02-180 through 33.1-24-02-199 shall comply with the recordkeeping requirements of this section.
 - b. A remanufacturer or other person that stores or treats the hazardous secondary material in more than one hazardous secondary material management unit subject to the provisions of sections 33.1-24-02-180 through 33.1-24-02-199 may comply with the recordkeeping requirements for these hazardous secondary material management units in one recordkeeping system if the system identifies each record by each hazardous secondary material management unit.
2. Remanufacturers and other persons that store or treat the hazardous secondary material shall record and keep the following information at the facility:
 - a. For each piece of equipment to which sections 33.1-24-02-180 through 33.1-24-02-199 applies:
 - (1) Equipment identification number and hazardous secondary material management unit identification.
 - (2) Approximate locations within the facility (for example, identify the hazardous secondary material management unit on a facility plot plan).

(3) Type of equipment (for example, a pump or pipeline valve).

(4) Percent-by-weight total organics in the hazardous secondary material stream at the equipment.

(5) Hazardous secondary material state at the equipment (for example, gas and vapor or liquid).

(6) Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").

b. [Reserved]

c. Where a remanufacturer or other person that stores or treats the hazardous secondary material chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-02-175.

d. Documentation of compliance with section 33.1-24-02-190, including the detailed design documentation or performance test results specified in subdivision d of subsection 2 of section 33.1-24-02-175.

3. When each leak is detected as specified in sections 33.1-24-02-182, 33.1-24-02-183, 33.1-24-02-187, and 33.1-24-02-188, the following requirements apply:

a. A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with subsection 1 of section 33.1-24-02-188, and the date the leak was detected, must be attached to the leaking equipment.

b. The identification on equipment, except on a valve, may be removed after it has been repaired.

c. The identification on a valve may be removed after it has been monitored for two successive months as specified in subsection 3 of section 33.1-24-02-187 and no leak has been detected during those two months.

4. When each leak is detected as specified in sections 33.1-24-02-182, 33.1-24-02-183, 33.1-24-02-187, and 33.1-24-02-188, the following information must be recorded in an inspection log and must be kept at the facility:

a. The instrument and operator identification numbers and the equipment identification number.

b. The date evidence of a potential leak was found in accordance with subsection 1 of section 33.1-24-02-188.

c. The date the leak was detected and the dates of each attempt to repair the leak.

d. Repair methods applied in each attempt to repair the leak.

e. "Above ten thousand" if the maximum instrument reading measured by the methods specified in subsection 2 of section 33.1-24-02-193 after each repair attempt is equal to or greater than ten thousand parts per million.

f. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.

- g. Documentation supporting the delay of repair of a valve in compliance with subsection 3 of section 33.1-24-02-189.
 - h. The signature of the remanufacturer or other person that stores or treats the hazardous secondary material (or designate) whose decision it was that repair could not be effected without a hazardous secondary material management unit shutdown.
 - i. The expected date of successful repair of the leak if a leak is not repaired within fifteen calendar days.
 - j. The date of successful repair of the leak.
5. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of section 33.1-24-02-190 must be recorded and kept up-to-date at the facility as specified in subsection 3 of section 33.1-24-02-175. Design documentation is specified in subdivisions a and b of subsection 3 of section 33.1-24-02-175 and monitoring, operating, and inspection information in subdivisions c through h of subsection 3 of section 33.1-24-02-175.
6. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
7. The following information pertaining to all equipment subject to the requirements in sections 33.1-24-02-182 through 33.1-24-02-190 must be recorded in a log that is kept at the facility:
- a. A list of identification numbers for equipment (except welded fittings) subject to the requirements of sections 33.1-24-02-180 through 33.1-24-02-199.
 - b. Equipment.
 - (1) A list of identification numbers for equipment that the remanufacturer or other person that stores or treats the hazardous secondary material elects to designate for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, under the provisions of subsection 5 of section 33.1-24-02-182, subsection 9 of section 33.1-24-02-183, and subsection 6 of section 33.1-24-02-187.
 - (2) The designation of this equipment as subject to the requirements of subsection 5 of section 33.1-24-02-182, subsection 9 of section 33.1-24-02-183, or subsection 6 of section 33.1-24-02-187 must be signed by the remanufacturer or other person that stores or treats the hazardous secondary material.
 - c. A list of equipment identification numbers for pressure relief devices required to comply with subsection 1 of section 33.1-24-02-184.
 - d. Data.
 - (1) The dates of each compliance test required in subsection 5 of section 33.1-24-02-182, subsection 9 of section 33.1-24-02-183, section 33.1-24-02-184, and subsection 6 of section 33.1-24-02-187.
 - (2) The background level measured during each compliance test.
 - (3) The maximum instrument reading measured at the equipment during each compliance test.

e. A list of identification numbers for equipment in vacuum service.

f. Identification, either by list or location (area or group) of equipment that contains or contacts hazardous secondary material with an organic concentration of at least ten percent by weight for less than three hundred hours per calendar year.

8. The following information pertaining to all valves subject to the requirements of subsections 7 and 8 of section 33.1-24-02-187 must be recorded in a log that is kept at the facility:

a. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

b. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

9. The following information must be recorded in a log that is kept at the facility for valves complying with section 33.1-24-02-192:

a. A schedule of monitoring.

b. The percent of valves found leaking during each monitoring period.

10. The following information must be recorded in a log that is kept at in the facility:

a. Criteria required in paragraph 2 of subdivision e of subsection 4 of section 33.1-24-02-182 and subdivision b of subsection 5 of section 33.1-24-02-183 and an explanation of the design criteria.

b. Any changes to these criteria and the reasons for the changes.

11. The following information must be recorded in a log that is kept at the facility for use in determining exemptions as provided in the applicability section of sections 33.1-24-02-180 through 33.1-24-02-190 and other specific sections:

a. An analysis determining the design capacity of the hazardous secondary material management unit.

b. A statement listing the hazardous secondary material influent to and effluent from each hazardous secondary material management unit subject to the requirements in sections 33.1-24-02-182 through 33.1-24-02-190 and an analysis determining whether these hazardous secondary materials are heavy liquids.

c. An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in sections 33.1-24-02-182 through 33.1-24-02-190. The record must include supporting documentation as required by subdivision c of subsection 4 of section 33.1-24-02-193 when application of the knowledge of the nature of the hazardous secondary material stream or the process by which it was produced is used. If the remanufacturer or other person that stores or treats the hazardous secondary material takes any action (for example, changing the process that produced the material) that could result in an increase in the total organic content of the material contained in or contacted by equipment determined not to be subject to the requirements in sections 33.1-24-02-182 through 33.1-24-02-190, then a new determination is required.

12. Records of the equipment leak information required by subsection 4 and the operating information required by subsection 5 need be kept only three years.
13. The remanufacturer or other person that stores or treats the hazardous secondary material at a facility with equipment that is subject to sections 33.1-24-02-180 through 33.1-24-02-199 and to regulations at 40 code of federal regulations part 60, part 61, or part 63 may elect to determine compliance with sections 33.1-24-02-180 through 33.1-24-02-199 either by documentation pursuant to section 33.1-24-02-194, or by documentation of compliance with the regulations at 40 CFR part 60, part 61, or part 63 pursuant to the relevant provisions of the regulations at 40 CFR part 60, part 61, or part 63. The documentation of compliance under regulations at 40 CFR part 60, part 61, or part 63 must be kept with or made readily available at the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-195. [Reserved].

33.1-24-02-196. [Reserved].

33.1-24-02-197. [Reserved].

33.1-24-02-198. [Reserved].

33.1-24-02-199. [Reserved].

33.1-24-02-200. Applicability to air emission standards for tanks and containers.

1. The requirements of sections 33.1-24-02-200 through 33.1-24-02-214 apply to tanks and containers that contain hazardous secondary materials excluded under the remanufacturing exclusion at subdivision z of subsection 1 of section 33.1-24-02-04, unless the tanks and containers are equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63.
2. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-201. Definitions.

As used in sections 33.1-24-02-200 through 33.1-24-02-214, all terms not defined herein have the meaning given them in chapter 23.1-04, chapters 33.1-24-01 through 33.1-24-05 and section 33.1-24-05-451.

1. “Average volatile organic concentration or average VO concentration” means the mass-weighted average volatile organic concentration of a hazardous secondary material as determined in accordance with the requirements of section 33.1-24-02-204.
2. “Cover” means a device that provides a continuous barrier over the hazardous secondary material managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from

the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

3. “Empty hazardous secondary material container” means:

a. A container from which all hazardous secondary materials have been removed that can be removed using the practices commonly employed to remove materials from that type of container, for example, pouring, pumping, and aspirating, and no more than two and one-half centimeters (one inch) of residue remain on the bottom of the container or inner liner,

b. A container that is less than or equal to one hundred nineteen gallons in size and no more than three percent by weight of the total capacity of the container remains in the container or inner liner, or

c. A container that is greater than one hundred nineteen gallons in size and no more than three-tenths of one percent by weight of the total capacity of the container remains in the container or inner liner.

4. “Floating membrane cover” means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous secondary material being managed in a surface impoundment.

5. “Liquid-mounted seal” means a foam or liquid-filled primary seal mounted in contact with the hazardous secondary material between the tank wall and the floating roof continuously around the circumference of the tank.

6. “Material determination” means performing all applicable procedures in accordance with the requirements of section 33.1-24-02-204 to determine whether a hazardous secondary material meets standards specified in sections 33.1-24-02-200 through 33.1-24-02-214. Examples of a material determination include performing the procedures in accordance with the requirements of section 33.1-24-02-204 to determine the average volatile organic concentration of a hazardous secondary material at the point of material origination; the average volatile organic concentration of a hazardous secondary material at the point of material treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous secondary material; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous secondary material and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous secondary material in a tank and comparing the results to the applicable standards.

7. “Maximum organic vapor pressure” means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions (for example, temperature, agitation, pH effects of combining materials) reasonably expected to occur in the tank. For the purpose of sections 33.1-24-02-200 through 33.1-24-02-214, maximum organic vapor pressure is determined using the procedures specified in subsection 3 of section 33.1-24-02-204.

8. “No detectable organic emissions” means no escape of organics to the atmosphere as determined using the procedure specified in subsection 4 of section 33.1-24-02-204.

9. “Point of material origination” means as follows:

a. When the remanufacturer or other person that stores or treats the hazardous secondary material is the generator of the hazardous secondary material, the point of material origination means the point where a material produced by a system, process, or material

management unit is determined to be a hazardous secondary material excluded under subdivision z of subsection 1 of section 33.1-24-02-04.

b. When the remanufacturer or other person that stores or treats the hazardous secondary material is not the generator of the hazardous secondary material, point of material origination means the point where the remanufacturer or other person that stores or treats the hazardous secondary material accepts delivery or takes possession of the hazardous secondary material.

10. “Safety device” means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of sections 33.1-24-02-200 through 33.1-24-02-214, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

11. “Vapor-mounted seal” means a continuous seal that is mounted such that there is a vapor space between the hazardous secondary material in the unit and the bottom of the seal.

12. “Volatile organic concentration” or “VO concentration” means the fraction by weight of the volatile organic compounds contained in a hazardous secondary material expressed in terms of parts per million as determined by direct measurement or by knowledge of the material in accordance with the requirements of section 33.1-24-02-204. For the purpose of determining the VO concentration of a hazardous secondary material, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/meter³] at twenty-five degrees Celsius must be included.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-202. Standards - General.

1. This section applies to the management of hazardous secondary material in tanks and containers subject to sections 33.1-24-02-200 through 33.1-24-02-214.

2. The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each hazardous secondary material management unit in accordance with standards specified in sections 33.1-24-02-204 through 33.1-24-02-207, as applicable to the hazardous secondary material management unit, except as provided for in subsection 3.

3. A tank or container is exempt from standards specified in sections 33.1-24-02-204 through 33.1-24-02-207, as applicable, provided that the hazardous secondary material management unit is a tank or container for which all hazardous secondary material entering the unit has an average

VO concentration at the point of material origination of less than five hundred parts per million by weight. The average VO concentration must be determined using the procedures specified in subsection 1 of section 33.1-24-02-203. The remanufacturer or other person that stores or treats the hazardous secondary material shall review and update, as necessary, this determination at least once every twelve months following the date of the initial determination for the hazardous secondary material streams entering the unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-203. Material determination procedures.

1. Material determination procedure to determine average volatile organic (VO) concentration of a hazardous secondary material at the point of material origination.

a. A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the average VO concentration at the point of material origination for each hazardous secondary material placed in a hazardous secondary material management unit exempted under the provisions of subdivision a of subsection 3 of section 33.1-24-02-202 from using air emission controls in accordance with standards specified in sections 33.1-24-02-204 through 33.1-24-02-207, as applicable to the hazardous secondary material management unit.

(1) An initial determination of the average VO concentration of the material stream must be made before the first time any portion of the material in the hazardous secondary material stream is placed in a hazardous secondary material management unit exempted under the provisions of subdivision a of subsection 3 of section 33.1-24-02-202 from using air emission controls, and thereafter an initial determination of the average VO concentration of the material stream must be made for each averaging period that a hazardous secondary material is managed in the unit; and

(2) Perform a new material determination whenever changes to the source generating the material stream are reasonably likely to cause the average VO concentration of the hazardous secondary material to increase to a level that is equal to or greater than the applicable VO concentration limits specified in section 33.1-24-02-202.

b. For a material determination that is required by subdivision a, the average VO concentration of a hazardous secondary material at the point of material origination must be determined using either direct measurement as specified in subdivision c or by knowledge as specified in subdivision d.

c. Direct measurement to determine average VO concentration of a hazardous secondary material at the point of material origination.

(1) Identification. The remanufacturer or other person that stores or treats the hazardous secondary material shall identify and record in a log that is kept at the facility the point of material origination for the hazardous secondary material.

(2) Sampling. Samples of the hazardous secondary material stream must be collected at the point of material origination in a manner such that volatilization of organics contained in the material and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

- (a) The averaging period to be used for determining the average VO concentration for the hazardous secondary material stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the remanufacturer or other person that stores or treats the hazardous secondary material determines is appropriate for the hazardous secondary material stream but may not exceed 1 year.
- (b) A sufficient number of samples, but no less than four samples, must be collected and analyzed for a hazardous secondary material determination. All of the samples for a given material determination must be collected within a one-hour period. The average of the four or more sample results constitutes a material determination for the material stream. One or more material determinations may be required to represent the complete range of material compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous secondary material stream. Examples of such normal variations are seasonal variations in material quantity or fluctuations in ambient temperature.
- (c) All samples must be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the hazardous secondary material and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous secondary material stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained at the facility. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in Method 25D in 40 CFR part 60, appendix A.
- (d) Sufficient information, as specified in the "site sampling plan" required under subparagraph c, must be prepared and recorded to document the material quantity represented by the samples and, as applicable, the operating conditions for the source or process generating the hazardous secondary material represented by the samples.
- (3) Analysis. Each collected sample must be prepared and analyzed in accordance with Method 25D in 40 CFR part 60, appendix A for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed material concentration accounts for and reflects all organic compounds in the material with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/meters³] at twenty-five degrees Celsius. At the discretion of the remanufacturer or other person that stores or treats the hazardous secondary material, the test data obtained may be adjusted by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at twenty-five degrees Celsius. To adjust these data, the measured concentration of each individual chemical constituent contained in the material is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the remanufacturer or other person that stores or treats the hazardous secondary material elects to adjust the test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at twenty-five degrees Celsius contained in the material. Constituent-specific

adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in subparagraph a or b and provided the requirement to reflect all organic compounds in the material with Henry's law constant values greater than or equal to 0.1 Y/X [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/meters³] at twenty-five degrees Celsius, is met.

(a) Any environmental protection agency standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods," 40 CFR part 63, appendix D.

(b) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

(4) Calculations.

(a) The average VO concentration (\bar{C}) on a mass-weighted basis must be calculated by using the results for all material determinations conducted in accordance with paragraphs 2 and 3 and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

\bar{C} = Average VO concentration of the hazardous secondary material at the point of material origination on a mass-weighted basis, parts per million weight.

i = Individual material determination "i" of the hazardous secondary material.

n = Total number of material determinations of the hazardous secondary material conducted for the averaging period (not to exceed one year).

Q_i = Mass quantity of hazardous secondary material stream represented by C_i , kilograms per hour.

Q_T = Total mass quantity of hazardous secondary material during the averaging period, kilogram per hour.

C_i = Measured VO concentration of material determination "i" as determined in accordance with the requirements of paragraph 3 (for example, the average of the four or more samples specified in subparagraph b of paragraph 2), parts per million weight.

(b) For the purpose of determining C_i , for individual material samples analyzed in accordance with paragraph 3, the remanufacturer or other person that stores or

treats the hazardous secondary material shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

[1] If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method at section 4.4 of Method 25D in 40 CFR part 60, appendix A.

[2] If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the material that has a Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquidphase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/meter³] at twenty-five degrees Celsius.

d. Use of knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material to determine average VO concentration of a hazardous secondary material at the point of material origination.

(1) Documentation must be prepared that presents the information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material of the hazardous secondary material stream's average VO concentration. Examples of information that may be used as the basis for knowledge include: Material balances for the source or process generating the hazardous secondary material stream; constituent-specific chemical test data for the hazardous secondary material stream from previous testing which are still applicable to the current material stream; previous test data for other locations managing the same type of material stream; or other knowledge based on information included in shipping papers or material certification notices.

(2) If test data are used as the basis for knowledge, then the remanufacturer or other person that stores or treats the hazardous secondary material shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, a remanufacturer or other person that stores or treats the hazardous secondary material may use organic concentration test data for the hazardous secondary material stream which are validated in accordance with Method 301 in 40 CFR part 63, appendix A as the basis for knowledge of the material.

(3) A remanufacturer or other person that stores or treats the hazardous secondary material using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous secondary material may adjust the test data to the corresponding average VO concentration value which would have been obtained had the material samples been analyzed using Method 25D in 40 CFR part 60, appendix A. To adjust these data, the measured concentration for each individual chemical constituent contained in the material is multiplied by the appropriate constituent specific adjustment factor (f_{m25D}).

(4) In the event that the department and the remanufacturer or other person that stores or treats the hazardous secondary material disagree on a determination of the average VO concentration for a hazardous secondary material stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in subdivision c shall be used to establish compliance with the applicable requirements of sections 33.1-24-02-200 through 33.1-24-02-214. The department may perform or request that the remanufacturer or

other person that stores or treats the hazardous secondary material perform this determination using direct measurement. The remanufacturer or other person that stores or treats the hazardous secondary material may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of paragraph 3 of subdivision c.

2. [Reserved]

3. Procedure to determine the maximum organic vapor pressure of a hazardous secondary material in a tank.

a. A remanufacturer or other person that stores or treats the hazardous secondary material shall determine the maximum organic vapor pressure for each hazardous secondary material placed in a tank using Tank Level 1 controls in accordance with standards specified in subsection 3 of section 33.1-24-02-204.

b. A remanufacturer or other person that stores or treats the hazardous secondary material shall use either direct measurement as specified in subdivision c or knowledge of the waste as specified by subdivision d to determine the maximum organic vapor pressure which is representative of the hazardous secondary material composition stored or treated in the tank.

c. Direct measurement to determine the maximum organic vapor pressure of a hazardous secondary material.

(1) Sampling. A sufficient number of samples must be collected to be representative of the hazardous secondary material contained in the tank. All samples must be collected and handled in accordance with written procedures prepared by the remanufacturer or other person that stores or treats the hazardous secondary material and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous secondary material are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan must be maintained at the facility. An example of acceptable sample collection and handling procedures may be found in Method 25D in 40 CFR part 60, appendix A.

(2) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous secondary material:

(a) Method 25E in 40 CFR part 60, appendix A;

(b) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," (as incorporated by reference in section 33.1-24-01-05);

(c) Methods obtained from standard reference texts;

(d) ASTM Method 2879-92 (as incorporated by reference in section 33.1-24-01-05); and

(e) Any other method approved by the department.

d. Use of knowledge to determine the maximum organic vapor pressure of the hazardous secondary material. Documentation must be prepared and recorded that presents the

information used as the basis for the knowledge by the remanufacturer or other person that stores or treats the hazardous secondary material that the maximum organic vapor pressure of the hazardous secondary material is less than the maximum vapor pressure limit listed in paragraph 1 of subdivision a of subsection 2 of section 33.1-24-02-204 for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous secondary material is generated by a process for which at other locations it previously has been determined by direct measurement that the hazardous secondary material's waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

4. Procedure for determining no detectable organic emissions for the purpose of complying with sections 33.1-24-02-200 through 33.1-24-02-214:

- a. The test must be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the cover and associated closure devices must be checked. Potential leak interfaces that are associated with covers and closure devices include: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.
- b. The test must be performed when the unit contains a hazardous secondary material having an organic concentration representative of the range of concentrations for the hazardous secondary material expected to be managed in the unit. During the test, the cover and closure devices must be secured in the closed position.
- c. The detection instrument must meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 must be for the average composition of the organic constituents in the hazardous secondary material placed in the hazardous secondary management unit, not for each individual organic constituent.
- d. The detection instrument must be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.
- e. Calibration gases must be as follows:
 - (1) Zero air (less than ten parts per million volume hydrocarbon in air); and
 - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million volume methane or n-hexane.
- f. The background level must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.
- g. Each potential leak interface must be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface must be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (for example, some pressure relief devices), the instrument probe inlet must be placed at approximately the center of the exhaust area to the atmosphere.

- h. The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of five hundred parts per million volume except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison must be as specified in subdivision i. If the difference is less than five hundred parts per million volume, then the potential leak interface is determined to operate with no detectable organic emissions.
- i. For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of ten thousand parts per million weight. If the difference is less than ten thousand parts per million weight, then the potential leak interface is determined to operate with no detectable organic emissions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-204. Standards - Tanks.

- 1. The provisions of this section apply to the control of air pollutant emissions from tanks for which subsection 2 of section 33.1-24-02-202 references the use of this section for such air emission control.
- 2. The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:
 - a. For a tank that manages hazardous secondary material that meets all of the conditions specified in paragraphs 1 through 2, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in subsection 3 or the Tank Level 2 controls specified in subsection 4.
 - (1) The hazardous secondary material in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:
 - (a) For a tank design capacity equal to or greater than one hundred fifty one meters³ (5,330 feet³), the maximum organic vapor pressure limit for the tank is five and two-tenths kilopascals.
 - (b) For a tank design capacity equal to or greater than seventy-five meters³ (2,650 feet³) but less than one hundred fifty one meters³ (5,330 feet³), the maximum organic vapor pressure limit for the tank is twenty seven and six tenths kilopascals.
 - (c) For a tank design capacity less than seventy-five meters³ (2,650 feet³), the maximum organic vapor pressure limit for the tank is seventy-six and six tenths kilopascals.
 - (2) The hazardous secondary material in the tank is not heated by the remanufacturer or other person that stores or treats the hazardous secondary material to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous secondary material is determined for the purpose of complying with paragraph 1.

b. For a tank that manages hazardous secondary material which does not meet all of the conditions specified in paragraphs 1 through 2 of subdivision a, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of subsection 4. An example of tanks required to use Tank Level 2 controls is a tank for which the hazardous secondary material in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph 1 of subdivision a.

3. Remanufacturers or other persons that store or treats the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in subdivisions a through d:

a. The remanufacturer or other person that stores or treats that hazardous secondary material shall determine the maximum organic vapor pressure for a hazardous secondary material to be managed in the tank using Tank Level 1 controls before the first time the hazardous secondary material is placed in the tank. The maximum organic vapor pressure must be determined using the procedures specified in subsection 3 of section 33.1-24-02-203. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform a new determination whenever changes to the hazardous secondary material managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph 1 of subdivision a of subsection 2, as applicable to the tank.

b. The tank must be equipped with a fixed roof designed to meet the following specifications:

(1) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the hazardous secondary material in the tank. The fixed roof may be a separate cover installed on the tank (for example, a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (for example, a horizontal cylindrical tank equipped with a hatch).

(2) The fixed roof must be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(3) Each opening in the fixed roof, and any manifold system associated with the fixed roof, must be either:

(a) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(b) Connected by a closed-vent system that is vented to a control device. The control device must remove or destroy organics in the vent stream, and must be operating whenever hazardous secondary material is managed in the tank, except as provided for in items 1 and 2.

[1] During periods when it is necessary to provide access to the tank for performing the activities of item 2, venting of the vapor headspace underneath the fixed roof to the control device is not required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the remanufacturer or other person that

stores or treats the hazardous secondary material promptly shall secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

[2] During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(4) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include: organic vapor permeability, the effects of any contact with the hazardous secondary material or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

c. Whenever a hazardous secondary material is in the tank, the fixed roof must be installed with each closure device secured in the closed position except as follows:

(1) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(b) To remove accumulated sludge or other residues from the bottom of tank.

(2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(3) Opening of a safety device, as defined in section 33.1-24-02-201, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the air emission control equipment in accordance with the following requirements:

(1) The fixed roof and its closure devices must be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except under the special conditions provided for in subsection 12.

(3) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subsection 11.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-02-209.

4. Remanufacturers or other persons that store or treat the hazardous secondary material controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

a. A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in subsection 5;

b. A tank equipped with an external floating roof in accordance with the requirements specified in subsection 6;

c. A tank vented through a closed-vent system to a control device in accordance with the requirements specified in subsection 7;

d. A pressure tank designed and operated in accordance with the requirements specified in subsection 8; or

e. A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in subsection 9.

5. The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in subdivisions a through c.

a. The tank must be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(1) The internal floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(2) The internal floating roof must be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(a) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in section 33.1-24-02-201; or

(b) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(3) The internal floating roof must meet the following specifications:

(a) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(b) Each opening in the internal floating roof must be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(c) Each penetration of the internal floating roof for the purpose of sampling must have a slit fabric cover that covers at least ninety percent of the opening.

(d) Each automatic bleeder vent and rim space vent must be gasketed.

(e) Each penetration of the internal floating roof that allows for passage of a ladder must have a gasketed sliding cover.

(f) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover.

b. The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and shall be completed as soon as practical.

(2) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(3) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof must be bolted or fastened closed (for example, no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

c. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof in accordance with the procedures specified as follows:

(1) The floating roof and its closure devices must be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include: the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in

the seal fabric; the gaskets no longer close off the hazardous secondary material surface from the atmosphere; or the slotted membrane has more than ten percent open area.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the internal floating roof components as follows except as provided in paragraph 3:

(a) Visually inspect the internal floating roof components through openings on the fixed-roof (for example, manholes and roof hatches) at least once every twelve months after initial fill, and

(b) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every ten years.

(3) As an alternative to performing the inspections specified in paragraph 2 for an internal floating roof equipped with two continuous seals mounted one above the other, the remanufacturer or other person that stores or treats the hazardous secondary material may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five years.

(4) Prior to each inspection required by paragraph 2 or 3, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the department of the date and location of the inspection as follows:

(a) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the department at least thirty calendar days before refilling the tank except when an inspection is not planned as provided for in subparagraph b.

(b) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection thirty calendar days before refilling the tank, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.

(5) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subsection 11.

(6) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-02-209.

d. Safety devices, as defined in section 33.1-24-02-201, may be installed and operated as necessary on any tank complying with the requirements of this subsection.

6. The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in subdivisions a through c.

a. The remanufacturer or other person that stores or treats the hazardous secondary material shall design the external floating roof in accordance with the following requirements:

(1) The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(2) The floating roof must be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(a) The primary seal must be a liquid-mounted seal or a metallic shoe seal, as defined in section 33.1-24-02-201. The total area of the gaps between the tank wall and the primary seal may not exceed two hundred twelve square centimeters per meter (10.0 square inches per foot) of tank diameter, and the width of any portion of these gaps may not exceed three and eight-tenths centimeters (1.5 inches). If a metallic shoe seal is used for the primary seal, the metallic shoe seal must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least sixty-one centimeters above the liquid surface.

(b) The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal may not exceed twenty-one and two-tenths square centimeters per meter (1.0 square inches per foot) of tank diameter, and the width of any portion of these gaps shall not exceed one and three-tenths centimeters (0.5 inches).

(3) The external floating must meet the following specifications:

(a) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof must provide a projection below the liquid surface.

(b) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be equipped with a gasketed cover, seal, or lid.

(c) Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(d) Each automatic bleeder vent and each rim space vent must be equipped with a gasket.

(e) Each roof drain that empties into the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening.

(f) Each unslotted and slotted guide pole well must be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(g) Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole.

(h) Each slotted guide pole must be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

(i) Each gauge hatch and each sample well must be equipped with a gasketed cover.

b. The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the tank in accordance with the following requirements:

(1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be completed as soon as practical.

(2) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be secured and maintained in a closed position at all times except when the closure device must be open for access.

(3) Covers on each access hatch and each gauge float well must be bolted or fastened when secured in the closed position.

(4) Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(5) Rim space vents must be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(6) The cap on the end of each unslotted guide pole must be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(7) The cover on each gauge hatch or sample well must be secured in the closed position at all times except when the hatch or well must be opened for access.

(8) Both the primary seal and the secondary seal must completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

c. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect the external floating roof in accordance with the procedures specified as follows:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material shall measure the external floating roof seal gaps in accordance with the following requirements:

(a) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform measurements of gaps between the tank wall and the primary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every five years.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform measurements of gaps between the tank wall and the secondary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(c) If a tank ceases to hold hazardous secondary material for a period of one year or more, subsequent introduction of hazardous secondary material into the tank must be considered an initial operation for the purposes of subparagraphs a and b.

(d) The remanufacturer or other person that stores or treats the hazardous secondary material shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

[1] The seal gap measurements must be performed at one or more floating roof levels when the roof is floating off the roof supports.

[2] Seal gaps, if any, must be measured around the entire perimeter of the floating roof in each place where a thirty-two one-hundredths centimeter (0.125 inch) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

[3] For a seal gap measured under this subdivision, the gap surface area must be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

[4] The total gap area must be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in paragraph 2 of subdivision a.

(e) In the event that the seal gap measurements do not conform to the specifications in paragraph 2 of subdivision a, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subsection 11.

(f) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-02-209.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the external floating roof in accordance with the following requirements:

(a) The floating roof and its closure devices must be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary material to check for defects that could result in air pollutant emissions. Defects include: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken,

cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(b) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.

(c) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subsection 11.

(d) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-02-209.

(3) Prior to each inspection required by paragraph 1 or 2, the remanufacturer or other person that stores or treats the hazardous secondary material shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The remanufacturer or other person that stores or treats the hazardous secondary material shall notify the department of the date and location of the inspection as follows:

(a) Prior to each inspection to measure external floating roof seal gaps as required under paragraph 1, written notification must be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the department at least thirty calendar days before the date the measurements are scheduled to be performed.

(b) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the remanufacturer or other person that stores or treats the hazardous secondary material so that it is received by the department at least thirty calendar days before refilling the tank except when an inspection is not planned as provided for in subparagraph c.

(c) When a visual inspection is not planned and the remanufacturer or other person that stores or treats the hazardous secondary material could not have known about the inspection thirty calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.

d. Safety devices, as defined in section 33.1-24-02-201, may be installed and operated as necessary on any tank complying with the requirements of this subsection.

7. The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in subdivisions a through c.

a. The tank must be covered by a fixed roof and vented directly through a closed vent system to a control device in accordance with the following requirements:

(1) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(2) Each opening in the fixed roof not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions.

(3) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include: organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(4) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33.1-24-02-207.

b. Whenever a hazardous secondary material is in the tank, the fixed roof must be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(1) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(b) To remove accumulated sludge or other residues from the bottom of a tank.

(2) Opening of a safety device, as defined in section 33.1-24-02-201, is allowed at any time conditions require doing so to avoid an unsafe condition.

c. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(1) The fixed roof and its closure devices must be visually inspected by the remanufacturer or other person that stores or treats the hazardous secondary

material to check for defects that could result in air pollutant emissions. Defects include: visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The closed-vent system and control device must be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in section 33.1-24-02-207.

(3) The remanufacturer or other person that stores or treats the hazardous secondary material shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the remanufacturer or other person that stores or treats the hazardous secondary material shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.

(4) In the event that a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of subsection 11.

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-02-209.

8. The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

a. The tank must be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

b. All tank openings must be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in subsection 4 of section 33.1-24-02-203.

c. Whenever a hazardous secondary material is in the tank, the tank must be operated as a closed system that does not vent to the atmosphere except under either or the following conditions as specified in paragraph 1 or 2:

(1) At those times when opening of a safety device, as defined in section 33.1-24-02-201, is required to avoid an unsafe condition.

(2) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of section 33.1-24-02-207.

9. The remanufacturer or other person that stores or treats the hazardous secondary material who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in subdivisions a through d.

a. The tank must be located inside an enclosure. The enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by

conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

b. The enclosure must be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in section 33.1-24-02-207.

c. Safety devices, as defined in section 33.1-24-02-201, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of subdivisions a and b.

d. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor the closed-vent system and control device as specified in section 33.1-24-02-207.

10. The remanufacturer or other person that stores or treats the hazardous secondary material shall transfer hazardous secondary material to a tank subject to this section in accordance with the following requirements:

a. Transfer of hazardous secondary material, except as provided in subdivision b, to the tank from another tank subject to this section must be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous secondary material to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR—National Emission Standards for Individual Drain Systems.

b. The requirements of subdivision a do not apply when transferring a hazardous secondary material to the tank under any of the following conditions:

(1) The hazardous secondary material meets the average VO concentration conditions specified in subdivision a of subsection 3 of section 33.1-24-02-202 at the point of material origination.

(2) The hazardous secondary material has been treated by an organic destruction or removal process to meet the requirements in subdivision b of subsection 3 of section 33.1-24-02-202.

(3) The hazardous secondary material meets the requirements of subdivision d of subsection 3 of section 33.1-24-02-202.

11. The remanufacturer or other person that stores or treats the hazardous secondary material shall repair each defect detected during an inspection performed in accordance with the requirements of subdivision d of subsection 3, subdivision c of subsection 5, subdivision c of subsection 6, or subdivision c of subsection 7 as follows:

a. The remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than five calendar days after detection, and repair shall be completed as soon as possible but no later than forty-five calendar days after detection except as provided in subdivision b.

b. Repair of a defect may be delayed beyond forty-five calendar days if the remanufacturer or other person that stores or treats the hazardous secondary material determines that

repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous secondary material normally managed in the tank. In this case, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect the next time the process or unit that is generating the hazardous secondary material managed in the tank stops operation. Repair of the defect must be completed before the process or unit resumes operation.

12. Following the initial inspection and monitoring of the cover as required by the applicable provisions of sections 33.1-24-02-200 through 33.1-24-02-214, subsequent inspection and monitoring may be performed at intervals longer than one year under the following special conditions:

a. In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, the remanufacturer or other person that stores or treats the hazardous secondary material may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(2) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of sections 33.1-24-02-200 through 33.1-24-02-214, as frequently as practicable during those times when a worker can safely access the cover.

b. In the case when a tank is buried partially or entirely underground, a remanufacturer or other person that stores or treats the hazardous secondary material is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (for example, fill ports, access hatches, gauge wells) which are located on or above the ground surface.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-205. [Reserved].

33.1-24-02-206. Standards - Containers.

1. The provisions of this section apply to the control of air pollutant emissions from containers for which subsection 2 of section 33.1-24-02-202 references the use of this section for such air emission control.

2. General requirements.

a. The remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container.

(1) For a container having a design capacity greater than one-tenth meters³ (3.5 feet³) and less than or equal to forty-six one-hundredths meters³ (16.25 feet³), the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection 3.

(2) For a container having a design capacity greater than forty-six one-hundredths meters³ (16.25 feet³) which is not in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in subsection 3.

(3) For a container having a design capacity greater than forty-six one-hundredths meters³ (16.25 feet³) which is in light material service, the remanufacturer or other person that stores or treats the hazardous secondary material shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in subsection 4.

3. Container Level 1 standards.

a. A container using Container Level 1 controls is one of the following:

(1) A container that meets the applicable United States department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.

(2) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (for example, a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (for example, a "portable tank" or bulk cargo container equipped with a screw-type cap).

(3) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous secondary material in the container such that no hazardous secondary material is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

b. A container used to meet the requirements of paragraph 2 or 3 of subdivision a must be equipped with covers and closure devices, as applicable to the container, which are composed of suitable materials to minimize exposure of the hazardous secondary material to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices include: organic vapor permeability; the effects of contact with the hazardous secondary material or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

c. If a hazardous secondary material is in a container using Container Level 1 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(a) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure devices in

the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the hazardous secondary material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(a) For the purpose of meeting the requirements of this section, an empty hazardous secondary material container may be open to the atmosphere at any time (for example, covers and closure devices on such a container are not required to be secured in the closed position).

(b) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary material container, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other persons that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the

container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in section 33.1-24-02-201, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(1) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within twenty-four hours after the container is accepted at the facility (for example, is not an empty hazardous secondary material container) the remanufacturer or other person that stores or treats the hazardous secondary material visually shall inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection must be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33.1-24-02-200 through 33.1-24-02-214).

(2) In the case when a container used for managing hazardous secondary material remains at the facility for a period of one year or more, the remanufacturer or other person that stores or treats the hazardous secondary material visually shall inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph 3.

(3) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material shall make first efforts at repair of the defect no later than twenty-four hours after detection and repair must be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, the hazardous secondary material must be removed from the container and the container may not be used to manage hazardous secondary material until the defect is repaired.

e. The remanufacturer or other person that stores or treats the hazardous secondary material shall maintain at the facility a copy of the procedure used to determine that containers with capacity of forty-six one-hundredths meters³ (16.25 feet³) or greater, which do not meet applicable department of transportation regulations as specified in subsection 6, are not managing hazardous secondary material in light material service.

4. Container Level 2 standards.

a. A container using Container Level 2 controls is one of the following:

(1) A container that meets the applicable United States department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.

(2) A container that operates with no detectable organic emissions as defined in section 33.1-24-02-201 and determined in accordance with the procedure specified in subsection 7.

(3) A container that has been demonstrated within the preceding twelve months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in subsection 8.

b. Transfer of hazardous secondary material in or out of a container using Container Level 2 controls must be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this subdivision include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary material is filled and subsequently purging the transfer line before removing it from the container opening.

c. Whenever a hazardous secondary material is in a container using Container Level 2 controls, the remanufacturer or other person that stores or treats the hazardous secondary material shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding hazardous secondary material or other material to the container as follows:

(a) In the case when the container is filled to the intended final level in one continuous operation, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the remanufacturer or other person that stores or treats the hazardous secondary material shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing hazardous secondary material from the container as follows:

(a) For the purpose of meeting the requirements of this section, an empty hazardous secondary material container may be open to the atmosphere at any time (for example, covers and closure devices are not required to be secured in the closed position on an empty container).

(b) In the case when discrete quantities or batches of material are removed from the container, but the container is not an empty hazardous secondary materials container, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous secondary material. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the remanufacturer or other person that stores or treats the hazardous secondary material promptly shall secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device must be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens must be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the remanufacturer or other person that stores or treats the hazardous secondary material based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in section 33.1-24-02-201, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(1) In the case when a hazardous secondary material already is in the container at the time the remanufacturer or other person that stores or treats the hazardous secondary material first accepts possession of the container at the facility and the container is not emptied within twenty-four hours after the container is accepted at the facility (for example, is not an empty hazardous secondary material container), the remanufacturer or other person that stores or treats the hazardous secondary material visually shall inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33.1-24-02-200 through 33.1-24-02-214).

(2) In the case when a container used for managing hazardous secondary material remains at the facility for a period of one year or more, the remanufacturer or other person that stores or treats the hazardous secondary material visually shall inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the remanufacturer or other person that stores or treats the hazardous secondary material shall repair the defect in accordance with the requirements of paragraph 3.

(3) When a defect is detected for the container, cover, or closure devices, the remanufacturer or other person that stores or treats the hazardous secondary material must make first efforts at repair of the defect no later than twenty-four hours after detection, and repair shall be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous secondary material must be removed from the container and the container may not be used to manage hazardous secondary material until the defect is repaired.

5. Container Level 3 standards.

a. A container using Container Level 3 controls is one of the following:

(1) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph 2 of subdivision b.

(2) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs 1 and 2 of subdivision b.

b. The remanufacturer or other person that stores or treats the hazardous secondary material shall meet the following requirements, as applicable to the type of air emission control equipment selected by the remanufacturer or other person that stores or treats the hazardous secondary material:

(1) The container enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The remanufacturer or other person that stores or treats the hazardous secondary material shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33.1-24-02-207.

c. Safety devices, as defined in section 33.1-24-02-201, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of subdivision a.

d. Remanufacturers or other persons that store or treat the hazardous secondary material using Container Level 3 controls in accordance with the provisions of sections 33.1-24-02-200 through 33.1-24-02-214 shall inspect and monitor the closed-vent systems and control devices as specified in section 33.1-24-02-207.

e. Remanufacturers or other persons that store or treat the hazardous secondary material that use Container Level 3 controls in accordance with the provisions of sections 33.1-24-02-200 through 33.1-24-02-214 shall prepare and maintain the records specified in subsection 4 of section 33.1-24-02-209.

f. Transfer of hazardous secondary material in or out of a container using Container Level 3 controls must be conducted in such a manner as to minimize exposure of the hazardous secondary material to the atmosphere, to the extent practical, considering the physical properties of the hazardous secondary material and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this subdivision include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous secondary material is filled and subsequently purging the transfer line before removing it from the container opening.

6. For the purpose of compliance with paragraph 1 of subdivision a of subsection 3 or paragraph 1 of subdivision a of subsection 4, containers must be used that meet the applicable United States department of transportation regulations on packaging hazardous materials for transportation as follows:

a. The container meets the applicable requirements specified in 49 CFR part 178 - Specifications for Packaging or 49 CFR part 179 - Specifications for Tank Cars.

b. Hazardous secondary material is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B - Special Permits; 49 CFR part 172 - Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans; 49 CFR part 173 - Shippers - General Requirements for Shipments and Packaging; and 49 CFR part 180 - Continuing Qualification and Maintenance of Packagings.

c. For the purpose of complying with sections 33.1-24-02-200 through 33.1-24-02-214, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed.

7. To determine compliance with the no detectable organic emissions requirement of paragraph 2 of subdivision a of subsection 4, the procedure specified in subsection 4 of section 33.1-24-02-203 must be used.

a. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, must be checked. Potential leak interfaces that are associated with containers include: the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

b. The test must be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the

hazardous secondary materials expected to be managed in this type of container. During the test, the container cover and closure devices must be secured in the closed position.

8. Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with paragraph 3 of subdivision a of subsection 4.
 - a. The test must be performed in accordance with Method 27 of 40 CFR part 60, appendix A.
 - b. A pressure measurement device must be used that has a precision of plus or minus 2.5 millimeters (0.1 inch) water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.
 - c. If the test results determined by Method 27 indicate the container sustains a pressure change less than or equal to seven hundred fifty pascals within five minutes after it is pressurized to a minimum of four thousand five hundred pascals, the container is determined to be vapor-tight.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-207. Standards - Closed-vent systems and control devices.

1. This section applies to each closed-vent system and control device installed and operated by the remanufacturer or other person who stores or treats the hazardous secondary material to control air emissions in accordance with standards of sections 33.1-24-02-200 through 33.1-24-02-214.
2. The closed-vent system shall meet the following requirements:
 - a. The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous secondary material in the hazardous secondary material management unit to a control device that meets the requirements specified in subsection 3.
 - b. The closed-vent system shall be designed and operated in accordance with the requirements specified in subsection 11 of section 33.1-24-02-173.
 - c. In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph 1 or a seal or locking device as specified in paragraph 2. For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.
 - (1) If a flow indicator is used to comply with this subdivision, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this subdivision, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.
 - (2) If a seal or locking device is used to comply with this subdivision, the device shall be placed on the mechanism by which the bypass device position is controlled (for example, valve handle, damper lever) when the bypass device is in the closed

position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The remanufacturer or other person that stores or treats the hazardous secondary material shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

d. The closed-vent system shall be inspected and monitored by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the procedure specified in subsection 12 of section 33.1-24-02-173.

3. The control device shall meet the following requirements:

a. The control device shall be one of the following devices:

(1) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least ninety-five percent by weight;

(2) An enclosed combustion device designed and operated in accordance with the requirements of subsection 3 of section 33.1-24-02-173; or

(3) A flare designed and operated in accordance with the requirements of subsection 4 of section 33.1-24-02-173.

b. The remanufacturer or other person that stores or treats the hazardous secondary material who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs 1 through 6.

(1) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraphs 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year.

(2) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during periods of planned routine maintenance.

(3) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during a control device system malfunction.

(4) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate compliance with the requirements of paragraph 1 (for example, planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraph 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year) by recording the information specified in paragraph 5 of subdivision a of subsection 5 of section 33.1-24-02-209.

(5) The remanufacturer or other person that stores or treats the hazardous secondary material shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

- (6) The remanufacturer or other person that stores or treats the hazardous secondary material shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (for example, periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, or fumes, or any combination, to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.
- c. The remanufacturer or other person that stores or treats the hazardous secondary material using a carbon adsorption system to comply with subdivision a shall operate and maintain the control device in accordance with the following requirements:
- (1) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of subsection 7 or 8 of section 33.1-24-02-173.
- (2) All carbon that is hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of subsection 14 of section 33.1-24-02-173, regardless of the average volatile organic concentration of the carbon.
- d. A remanufacturer or other person that stores or treats the hazardous secondary material using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with subdivision a shall operate and maintain the control device in accordance with the requirements of subsection 10 of section 33.1-24-02-173.
- e. The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a control device achieves the performance requirements of subdivision a as follows:
- (1) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate using either a performance test as specified in paragraph 3 or a design analysis as specified in paragraph 4 the performance of each control device except for the following:
- (a) A flare;
- (b) A boiler or process heater with a design heat input capacity of forty-four megawatts or greater;
- (c) A boiler or process heater into which the vent stream is introduced with the primary fuel;
- (2) A remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate the performance of each flare in accordance with the requirements specified in subsection 5 of section 33.1-24-02-173.
- (3) For a performance test conducted to meet the requirements of paragraph 1, the remanufacturer or other person that stores or treats the hazardous secondary material shall use the test methods and procedures specified in subdivisions a through d of subsection 3 of section 33.1-24-02-174.

- (4) For a design analysis conducted to meet the requirements of paragraph 1, the design analysis shall meet the requirements specified in paragraph 3 of subdivision d of subsection 2 of section 33.1-24-02-175.
- (5) The remanufacturer or other person that stores or treats the hazardous secondary material shall demonstrate that a carbon adsorption system achieves the performance requirements of subdivision a based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.
- f. If the remanufacturer or other person that stores or treats the hazardous secondary material and the department do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the remanufacturer or other person that stores or treats the hazardous secondary material in accordance with the requirements of paragraph 3 of subdivision e. The department may choose to have an authorized representative observe the performance test.
- g. The closed-vent system and control device shall be inspected and monitored by the remanufacture or other person that stores or treats the hazardous secondary material in accordance with the procedures specified in subdivision b of subsection 6 and subsection 12 of section 33.1-24-02-173. The readings from each monitoring device required by subdivision b of subsection 6 of section 33.1-24-02-173 shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 1

33.1-24-02-208. Inspection and monitoring requirements.

1. The remanufacturer or other person that stores or treats the hazardous secondary material shall inspect and monitor air emission control equipment used to comply with sections 33.1-24-02-200 through 33.1-24-02-214 in accordance with the applicable requirements specified in sections 33.1-24-02-204 through 33.1-24-02-207.
2. The remanufacturer or other person that stores or treats the hazardous secondary material shall develop and implement a written plan and schedule to perform the inspections and monitoring required by subsection 1. The remanufacturer or other person that stores or treats the hazardous secondary material shall keep the plan and schedule at the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 1

33.1-24-02-209. Recordkeeping requirements.

1. Each remanufacturer or other person that stores or treats the hazardous secondary material subject to requirements of sections 33.1-24-02-200 through 33.1-24-02-214 shall record and maintain the information specified in subsections 2 through 10, as applicable to the facility.

Except for air emission control equipment design documentation and information required by subsections 9 and 10, records required by this section must be maintained at the facility for a minimum of three years. Air emission control equipment design documentation must be maintained at the facility until the air emission control equipment is replaced or otherwise no longer in service. Information required by subsections 9 and 10 must be maintained at the facility for as long as the hazardous secondary material management unit is not using air emission controls specified in sections 33.1-24-02-204 through 33.1-24-02-207 in accordance with the conditions specified in subsection 4 or subdivision g of subsection 2 of section 33.1-24-02-200, respectively.

2. The remanufacturer or other person that stores or treats the hazardous secondary material using a tank with air emission controls in accordance with the requirements of section 33.1-24-02-204 shall prepare and maintain records for the tank that include the following information:

a. For each tank using air emission controls in accordance with the requirements of section 33.1-24-02-204, the remanufacturer or other person that stores or treats the hazardous secondary material shall record:

(1) A tank identification number (or other unique identification description as selected by the remanufacturer or other person that stores or treats the hazardous secondary material).

(2) A record for each inspection required by section 33.1-24-02-204 which includes the following information:

(a) Date inspection was conducted.

(b) For each defect detected during the inspection: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. If repair of the defect is delayed in accordance with the requirements of section 33.1-24-02-204, the remanufacturer or other person that stores or treats the hazardous secondary material also shall record the reason for the delay and the date that completion of repair of the defect is expected.

b. In addition to the information required by subdivision a, the remanufacturer or other person that stores or treats the hazardous secondary material shall record the following information, as applicable to the tank:

(1) The remanufacturer or other person that stores or treats the hazardous secondary material using a fixed roof to comply with the Tank Level 1 control requirements specified in subsection 3 of section 33.1-24-02-204 shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous secondary material in the tank performed in accordance with the requirements of subsection 3 of section 33.1-24-02-204. The records must include the date and time the samples were collected, the analysis method used, and the analysis results.

(2) The remanufacturer or other person that stores or treats the hazardous secondary material using an internal floating roof to comply with the Tank Level 2 control requirements specified in subsection 5 of section 33.1-24-02-204 shall prepare and maintain documentation describing the floating roof design.

(3) Remanufacturer or other persons that store or treat the hazardous secondary material using an external floating roof to comply with the Tank Level 2 control requirements

specified in subsection 6 of section 33.1-24-02-204 shall prepare and maintain the following records:

(a) Documentation describing the floating roof design and the dimensions of the tank.

(b) Records for each seal gap inspection required by subdivision c of subsection 6 of section 33.1-24-02-204 describing the results of the seal gap measurements. The records must include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. If the seal gap measurements do not conform to the specifications in subdivision a of subsection 6 of section 33.1-24-02-204, the records must include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(4) Each remanufacturer or other person that stores or treats the hazardous secondary material using an enclosure to comply with the Tank Level 2 control requirements specified in subsection 9 of section 33.1-24-02-204 shall prepare and maintain the following records:

(a) Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(b) Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.

3. [Reserved]

4. The remanufacturer or other person that stores or treats the hazardous secondary material using containers with Container Level 3 air emission controls in accordance with the requirements of section 33.1-24-02-206 shall prepare and maintain records that include the following information:

a. Records for the most recent set of calculations and measurements performed by the remanufacturer or other person that stores or treats the hazardous secondary material to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

b. Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.

5. The remanufacturer or other person that stores or treats the hazardous secondary material using a closed-vent system and control device in accordance with the requirements of section 33.1-24-02-207 shall prepare and maintain records that include the following information:

a. Documentation for the closed-vent system and control device which includes:

(1) Certification that is signed and dated by the remanufacturer or other person that stores or treats the hazardous secondary material stating the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph 2 or by performance tests as specified in paragraph 3 when

the tank or container is or would be operating at capacity or the highest level reasonably expected to occur.

(2) If a design analysis is used, then design documentation as specified in subdivision d of subsection 2 of section 33.1-24-02-175. The documentation must include information prepared by the remanufacturer or other person that stores or treats the hazardous secondary material or provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraph 3 of subdivision d of subsection 2 of section 33.1-24-02-175 and certification by the remanufacturer or other person that stores or treats the hazardous secondary material that the control equipment meets the applicable specifications.

(3) If performance tests are used, then a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-02-175 and all test results.

(4) Information as required by subdivisions a and b of subsection 3 of section 33.1-24-02-175, as applicable.

(5) A remanufacturer or other person that stores or treats the hazardous secondary material shall record, on a semiannual basis, the information specified in subparagraphs a and b for those planned routine maintenance operations that would require the control device not to meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-02-207, as applicable.

(a) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next six-month period. This description must include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(b) A description of the planned routine maintenance that was performed for the control device during the previous six-month period. This description must include the type of maintenance performed and the total number of hours during those six months that the control device did not meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-02-207, as applicable, due to planned routine maintenance.

(6) A remanufacturer or other person that stores or treats the hazardous secondary material shall record the information specified in subparagraphs a through c for those unexpected control device system malfunctions that would require the control device not to meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-02-207, as applicable.

(a) The occurrence and duration of each malfunction of the control device system.

(b) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the hazardous secondary material management unit through the closed-vent system to the control device while the control device is not properly functioning.

(c) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(7) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with paragraph 2 of subdivision c of subsection 3 of section 33.1-24-02-207.

6. The remanufacturer or other person that stores or treats the hazardous secondary material using a tank or container exempted under the hazardous secondary material organic concentration conditions specified in subsection 3 of section 33.1-24-02-202, shall prepare and maintain at the facility records documenting the information used for each material determination (for example, test results, measurements, calculations, and other documentation). If analysis results for material samples are used for the material determination, the remanufacturer or other person that stores or treats the hazardous secondary material shall record the date, time, and location that each material sample is collected in accordance with applicable requirements of section 33.1-24-02-203.
7. A remanufacturer or other person that stores or treats the hazardous secondary material designating a cover as "unsafe to inspect and monitor" pursuant to subsection 12 of section 33.1-24-02-204 or subsection 7 of section 33.1-24-02-205 shall record and keep at facility the following information: the identification numbers for hazardous secondary material management units with covers that are designated as "unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.
8. The remanufacturer or other person that stores or treats the hazardous secondary material that is subject to sections 33.1-24-02-200 through 33.1-24-02-214 and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of sections 33.1-24-02-200 through 33.1-24-02-214 by documentation either pursuant to sections 33.1-24-02-200 through 33.1-24-02-214, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-02-210. [Reserved].

33.1-24-02-211. [Reserved].

33.1-24-02-212. [Reserved].

33.1-24-02-213. [Reserved].

33.1-24-02-214. [Reserved].

APPENDIX I

Representative Sampling Methods

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the agency to be representative of the waste.

Extremely viscous liquid - ASTM Standard D140-70 Crushed or powdered material - ASTM Standard D346-75 Soil or rock-like material - ASTM Standard D420-69 Soil-like material - ASTM Standard D1452-65

Fly Ash-like material - ASTM Standard D2234-76 (ASTM Standards are available from ASTM, 1916 Race Street, Philadelphia, Pennsylvania 19103)

Containerized liquid wastes - "COLIWASA."

Liquid waste in pits, ponds, lagoons, and similar reservoirs - "Pond Sampler."

This manual also contains additional information on application of these protocols.

APPENDIX II

[Reserved]

APPENDIX III

[Reserved]

APPENDIX IV

Basis for Listing Hazardous Waste

EPA Hazardous Waste No.	Hazardous Waste Constituents for Which Listed
F001	<u>Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.</u>
F002	<u>Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.</u>
F003	<u>N.A.</u>
F004	<u>Cresols and cresylic acid, nitrobenzene.</u>
F005	<u>Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.</u>
F006	<u>Cadmium, hexavalent chromium, nickel, cyanide (complexed).</u>
F007	<u>Cyanide (salts).</u>
F008	<u>Cyanide (salts).</u>
F009	<u>Cyanide (salts).</u>
F010	<u>Cyanide (salts).</u>
F011	<u>Cyanide (salts).</u>
F012	<u>Cyanide (complexed).</u>
F019	<u>Hexavalent chromium, cyanide (complexed).</u>
F020	<u>Tetra- and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodi-benzofurans; tri- and tetrachloro-phenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.</u>
F021	<u>Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.</u>
F022	<u>Tetra-, penta, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.</u>
F023	<u>Tetra, and pentachlorodibenzo-p-dioxins; tetra-, and pentachlorodibenzofurans; tri- and tetra-chlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.</u>
F024	<u>Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1-2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.</u>
F025	<u>Chloromethane; dichloromethane; 1,2,4-trichloromethane; carbon tetrachloride; chloroethylene; 1,1-dichloroethane; 1,2-dichloroethane; trans-1,2-dichloroethylene; 1,1-dichloroethylene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; 1,1,1,2-tetrachloroethane; 1,1,2,2-tetrachloroethane; tetrachloroethylene; pentachloroethane; hexachloroethane; allyl chloride (3-chloropropene); dichloropropane; dichloropropene; 2-chloro-1,3-butadiene; hexachloro-1,3-butadiene; hexachlorocyclopentadiene; benzene; chlorobenzene; dichlorobenzene; 1,2,4-trichlorobenzene; tetrachlorobenzene; pentachlorobenzene; hexachlorobenzene; toluene; naphthalene.</u>
F026	<u>Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.</u>
F027	<u>Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.</u>
F028	<u>Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.</u>
F032	<u>Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.</u>
F034	<u>Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.</u>
F035	<u>Arsenic, chromium, lead.</u>
F037	<u>Benzene, benzo(a)pyrene, chrysene, lead, chromium.</u>
F038	<u>Benzene, benzo(a)pyrene, chrysene, lead, chromium.</u>

<u>EPA Hazardous Waste No.</u>	<u>Hazardous Waste Constituents for Which Listed</u>
<u>F039</u>	<u>All constituents for which treatment standards are specified for multisource leachate (wastewaters and nonwastewaters) under section 33.1-24-05-283, Table CCW.</u>
<u>K001</u>	<u>Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.</u>
<u>K002</u>	<u>Hexavalent chromium, lead.</u>
<u>K003</u>	<u>Hexavalent chromium, lead.</u>
<u>K004</u>	<u>Hexavalent chromium.</u>
<u>K005</u>	<u>Hexavalent chromium, lead.</u>
<u>K006</u>	<u>Hexavalent chromium.</u>
<u>K007</u>	<u>Cyanide (complexed), hexavalent chromium.</u>
<u>K008</u>	<u>Hexavalent chromium.</u>
<u>K009</u>	<u>Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.</u>
<u>K010</u>	<u>Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.</u>
<u>K011</u>	<u>Acrylonitrile, acetonitrile, hydrocyanic acid.</u>
<u>K013</u>	<u>Hydrocyanic acid, acrylonitrile, acetonitrile.</u>
<u>K014</u>	<u>Acetonitrile, acrylamide.</u>
<u>K015</u>	<u>Benzyl chloride, chlorobenzene, toluene, benzotrichloride.</u>
<u>K016</u>	<u>Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.</u>
<u>K017</u>	<u>Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.</u>
<u>K018</u>	<u>1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.</u>
<u>K019</u>	<u>Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.</u>
<u>K020</u>	<u>Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes, (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.</u>
<u>K021</u>	<u>Antimony, carbon tetrachloride, chloroform.</u>
<u>K022</u>	<u>Phenol, tars (polycyclic aromatic hydrocarbons).</u>
<u>K023</u>	<u>Phthalic anhydride, maleic anhydride.</u>
<u>K024</u>	<u>Phthalic anhydride, 1,4-naphthoquinone.</u>
<u>K025</u>	<u>Meta-dinitrobenzene, 2,4-dinitrotoluene.</u>
<u>K026</u>	<u>Paraldehyde, pyridines, 2-picoline.</u>
<u>K027</u>	<u>Toluene diisocyanate, toluene-2,4-diamine.</u>
<u>K028</u>	<u>1,1,1-trichloroethane, vinyl chloride.</u>
<u>K029</u>	<u>1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.</u>
<u>K030</u>	<u>Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.</u>
<u>K031</u>	<u>Arsenic.</u>
<u>K032</u>	<u>Hexachlorocyclopentadiene.</u>
<u>K033</u>	<u>Hexachlorocyclopentadiene.</u>
<u>K034</u>	<u>Hexachlorocyclopentadiene.</u>
<u>K035</u>	<u>Creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene dibenzo(a)anthracene, acenaphthalene.</u>
<u>K036</u>	<u>Toluene, phosphorodithioic and phosphorothioic acid esters.</u>
<u>K037</u>	<u>Toluene, phosphorodithioic and phosphorothioic acid esters.</u>

<u>EPA Hazardous Waste No.</u>	<u>Hazardous Waste Constituents for Which Listed</u>
<u>K038</u>	<u>Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.</u>
<u>K039</u>	<u>Phosphorodithioic and phosphorothioic acid esters.</u>
<u>K040</u>	<u>Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.</u>
<u>K041</u>	<u>Toxaphene.</u>
<u>K042</u>	<u>Hexachlorobenzene, ortho-dichlorobenzene.</u>
<u>K043</u>	<u>2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.</u>
<u>K044</u>	<u>N.A.</u>
<u>K045</u>	<u>N.A.</u>
<u>K046</u>	<u>Lead.</u>
<u>K047</u>	<u>N.A.</u>
<u>K048</u>	<u>Hexavalent chromium, lead.</u>
<u>K049</u>	<u>Hexavalent chromium, lead.</u>
<u>K050</u>	<u>Hexavalent chromium.</u>
<u>K051</u>	<u>Hexavalent chromium, lead.</u>
<u>K052</u>	<u>Lead.</u>
<u>K060</u>	<u>Cyanide, naphthalene, phenolic compounds, arsenic.</u>
<u>K061</u>	<u>Hexavalent chromium, lead, cadmium.</u>
<u>K062</u>	<u>Hexavalent chromium, lead.</u>
<u>K069</u>	<u>Hexavalent chromium, lead, cadmium.</u>
<u>K071</u>	<u>Mercury.</u>
<u>K073</u>	<u>Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.</u>
<u>K083</u>	<u>Aniline, diphenylamine, nitrobenzene, phenylenediamine.</u>
<u>K084</u>	<u>Arsenic.</u>
<u>K085</u>	<u>Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.</u>
<u>K086</u>	<u>Lead, hexavalent chromium.</u>
<u>K087</u>	<u>Phenol, naphthalene.</u>
<u>K088</u>	<u>Cyanide (complexes).</u>
<u>K093</u>	<u>Phthalic anhydride, maleic anhydride.</u>
<u>K094</u>	<u>Phthalic anhydride.</u>
<u>K095</u>	<u>1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.</u>
<u>K096</u>	<u>1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.</u>
<u>K097</u>	<u>Chlordane, heptachlor.</u>
<u>K098</u>	<u>Toxaphene.</u>
<u>K099</u>	<u>2,4-dichlorophenol, 2,4,6-trichlorophenol.</u>
<u>K100</u>	<u>Hexavalent chromium, lead, cadmium.</u>
<u>K101</u>	<u>Arsenic.</u>
<u>K102</u>	<u>Arsenic.</u>
<u>K103</u>	<u>Aniline, nitrobenzene, phenylenediamine.</u>
<u>K104</u>	<u>Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.</u>
<u>K105</u>	<u>Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.</u>
<u>K106</u>	<u>Mercury.</u>
<u>K107</u>	<u>1,1-Dimethylhydrazine (UDMH).</u>

<u>EPA Hazardous Waste No.</u>	<u>Hazardous Waste Constituents for Which Listed</u>
K108	<u>1,1-Dimethylhydrazine (UDMH).</u>
K109	<u>1,1-Dimethylhydrazine (UDMH).</u>
K110	<u>1,1-Dimethylhydrazine (UDMH).</u>
K111	<u>2,4-dinitrotoluene.</u>
K112	<u>2,4-toluenediamine, o-toluidine, p-toluidine, aniline.</u>
K113	<u>2,4-toluenediamine, o-toluidine, p-toluidine, aniline.</u>
K114	<u>2,4-toluenediamine, o-toluidine, p-toluidine.</u>
K115	<u>2,4-toluenediamine.</u>
K116	<u>Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.</u>
K117	<u>Ethylene dibromide.</u>
K118	<u>Ethylene dibromide.</u>
K123	<u>Ethylene thiourea.</u>
K124	<u>Ethylene thiourea.</u>
K125	<u>Ethylene thiourea.</u>
K126	<u>Ethylene thiourea.</u>
K131	<u>Dimethyl sulfate, methyl bromide.</u>
K132	<u>Methyl bromide.</u>
K136	<u>Ethylene dibromide.</u>
K141	<u>Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.</u>
K142	<u>Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.</u>
K143	<u>Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene.</u>
K144	<u>Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene.</u>
K145	<u>Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene.</u>
K147	<u>Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.</u>
K148	<u>Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.</u>
K149	<u>Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene.</u>
K150	<u>Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene.</u>
K151	<u>Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene.</u>
K156	<u>Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine.</u>
K157	<u>Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine.</u>
K158	<u>Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride.</u>
K159	<u>Benzene, butylate, eptc, molinate, pebulate, vernolate.</u>
K161	<u>Antimony, arsenic, metam-sodium, ziram.</u>
K169	<u>Benzene.</u>
K170	<u>Benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, 3-methylcholanthrene, 7, 12-dimethylbenz(a)anthracene.</u>
K171	<u>Benzene, arsenic.</u>
K172	<u>Benzene, arsenic.</u>

<u>EPA Hazardous Waste No.</u>	<u>Hazardous Waste Constituents for Which Listed</u>
K174	1,2,3,4,6,7,8-Heptachlorodibenzo- p-dioxin (1,2,3,4,6,7,8-HpCDD), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9- Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF), HxCDDs (All Hexachlorodibenzo-p- dioxins), HxCDFs (All Hexachlorodibenzofurans), PeCDDs (All Pentachlorodibenzo- p-dioxins), OCDD (1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin), OCDF (1,2,3,4,6,7,8,9-Octachlorodibenzofuran), PeCDFs (All Pentachlorodibenzofurans), TCDDs (All Tetrachlorodibenzo- p-dioxins), TCDFs (All Tetrachlorodibenzofurans).
K175	<u>Mercury.</u>
K176	<u>Arsenic, lead.</u>
K177	<u>Antimony.</u>
K178	<u>Thallium.</u>
K181	<u>Aniline, o-anisidine, 4-chloroaniline, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine.</u>

N.A. - Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

APPENDIX V

Hazardous Constituents

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>A2213</u>	<u>Ethanimidothioic acid, 2- (dimethylamino)-N-hydroxy-2-oxo-, methyl ester</u>	<u>30558-43-1</u>	<u>U394</u>
<u>Acetonitrile</u>	<u>Same</u>	<u>75-05-8</u>	<u>U003</u>
<u>Acetophenone</u>	<u>Ethanone, 1-phenyl-</u>	<u>98-86-2</u>	<u>U004</u>
<u>2-Acetylaminofluorene</u>	<u>Acetamide, N-9H-fluorene-2-yl-</u>	<u>53-96-3</u>	<u>U005</u>
<u>Acetyl chloride</u>	<u>Same</u>	<u>75-36-5</u>	<u>U006</u>
<u>1-Acetyl-2-thiourea</u>	<u>Acetamide, N-(aminothioxomethyl)-</u>	<u>591-08-2</u>	<u>P002</u>
<u>Acrolein</u>	<u>2-Propenal</u>	<u>107-02-08</u>	<u>P003</u>
<u>Acrylamide</u>	<u>2-Propenamido</u>	<u>79-06-1</u>	<u>U007</u>
<u>Acrylonitrile</u>	<u>2-Propenenitrile</u>	<u>107-13-1</u>	<u>U009</u>
<u>Aflatoxins</u>	<u>Same</u>	<u>1402-68-2</u>	
<u>Aldicarb</u>	<u>Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime</u>	<u>116-06-3</u>	<u>P070</u>
<u>Aldicarb sulfone</u>	<u>Propanal, 2-methyl-2- (methylsulfonyl) -, O-[(methylamino) carbonyl] oxime</u>	<u>1646-88-4</u>	<u>P203</u>
<u>Aldrin</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a- hexahydro-, (1alpha,4alpha,4abeta,5alpha, 8alpha,8abeta)-</u>	<u>309-00-2</u>	<u>P004</u>
<u>Allyl alcohol</u>	<u>2-Propen-1-ol</u>	<u>107-18-6</u>	<u>P005</u>
<u>Allyl chloride</u>	<u>1-Propane, 3-chloro</u>	<u>107-05-1</u>	
<u>Aluminum phosphide</u>	<u>Same</u>	<u>20859-73-8</u>	<u>P006</u>
<u>4-Aminobiphenyl</u>	<u>[1,1'-Biphenyl]-4-amine</u>	<u>92-67-1</u>	
<u>5-(Aminomethyl)-3-isoxazolol</u>	<u>3(2H)-Isoxazolone, 5-(aminomethyl)-</u>	<u>2763-96-4</u>	<u>P007</u>
<u>4-Aminopyridine</u>	<u>4-Pyridinamine</u>	<u>504-24-5</u>	<u>P008</u>
<u>Amitrole</u>	<u>1H-1,2,4-Triazol-3-amine</u>	<u>61-82-5</u>	<u>U011</u>
<u>Ammonium vanadate</u>	<u>Vanadic acid, ammonium salt</u>	<u>7803-55-6</u>	<u>P119</u>
<u>Aniline</u>	<u>Benzenamine</u>	<u>62-53-3</u>	<u>U012</u>
<u>o-Anisidine (2-methoxyaniline)</u>	<u>Benzenamine, 2-Methoxy-</u>	<u>90-04-0</u>	
<u>Antimony</u>	<u>Same</u>	<u>7440-36-0</u>	
<u>Antimony compounds, N.O.S.¹</u>			
<u>Aramite</u>	<u>Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester</u>	<u>140-57-8</u>	
<u>Arsenic</u>	<u>Same</u>	<u>7440-38-2</u>	
<u>Arsenic compounds, N.O.S.¹</u>			
<u>Arsenic acid</u>	<u>Arsenic acid H₃AsO₄</u>	<u>7778-39-4</u>	<u>P010</u>
<u>Arsenic pentoxide</u>	<u>Arsenic oxide As₂O₅</u>	<u>1303-28-2</u>	<u>P011</u>
<u>Arsenic trioxide</u>	<u>Arsenic oxide As₂O₃</u>	<u>1327-53-3</u>	<u>P012</u>
<u>Auramine</u>	<u>Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl</u>	<u>492-80-8</u>	<u>U014</u>
<u>Azaserine</u>	<u>L-Serine, diazoacetate (ester)</u>	<u>115-02-6</u>	<u>U015</u>
<u>Barban</u>	<u>Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester</u>	<u>101-27-9</u>	<u>U280</u>
<u>Barium</u>	<u>Same</u>	<u>7440-39-3</u>	
<u>Barium compounds, N.O.S.¹</u>			
<u>Barium cyanide</u>	<u>Same</u>	<u>542-62-1</u>	<u>P013</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Bendiocarb</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate</u>	<u>22781-23-3</u>	<u>U278</u>
<u>Bendiocarb pheonol</u>	<u>1,3-Benzodioxol-4-ol, 2,2-dimethyl-,</u>	<u>22961-82-6</u>	<u>U364</u>
<u>BenomyI</u>	<u>Carbamic acid, [1- [(butylamino) carbonyl]-1H-benzimidazol-2-yl] -, methyl ester</u>	<u>17804-35-2</u>	<u>U271</u>
<u>Benz[c]lacridine</u>	<u>Same</u>	<u>225-51-4</u>	<u>U016</u>
<u>Benz[a]anthracene</u>	<u>Same</u>	<u>56-55-3</u>	<u>U018</u>
<u>Benzal chloride</u>	<u>Benzene, (dichloromethyl)-</u>	<u>98-87-3</u>	<u>U017</u>
<u>Benzene</u>	<u>Same</u>	<u>71-43-2</u>	<u>U019</u>
<u>Benzene arsonic acid</u>	<u>Arsonic acid, phenyl-</u>	<u>98-05-5</u>	
<u>Benzidine</u>	<u>[1,1'-Biphenyl]-4,4'-diamine</u>	<u>92-87-5</u>	<u>U021</u>
<u>Benzo[b]fluoranthene</u>	<u>Benz[e]acephenanthrylene</u>	<u>205-99-2</u>	
<u>Benzo[j]fluoranthene</u>	<u>Same</u>	<u>205-82-3</u>	
<u>Benzo[k]fluoranthene</u>	<u>Same</u>	<u>207-08-9</u>	
<u>Benzo[a]pyrene</u>	<u>Same</u>	<u>50-32-8</u>	<u>U022</u>
<u>p-Benzoquinone</u>	<u>2,5-Cyclohexadiene-1,4-dione</u>	<u>106-51-4</u>	<u>U197</u>
<u>Benzotrichloride</u>	<u>Benzene, (trichloromethyl)-</u>	<u>98-07-7</u>	<u>U023</u>
<u>Benzyl chloride</u>	<u>Benzene, (chloromethyl)-</u>	<u>100-44-7</u>	<u>P028</u>
<u>Beryllium powder</u>	<u>Same</u>	<u>7440-41-7</u>	<u>P015</u>
<u>Beryllium compounds, N.O.S.¹</u>			
<u>Bis (pentamethylene)-thiuram tetrasulfide</u>	<u>Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-</u>	<u>120-54-7</u>	
<u>Bromoacetone</u>	<u>2-Propanone, 1-bromo-</u>	<u>598-31-2</u>	<u>P017</u>
<u>Bromoform</u>	<u>Methane, tribromo-</u>	<u>75-25-2</u>	<u>U225</u>
<u>4-Bromophenyl phenyl ether</u>	<u>Benzene, 1-bromo-4-phenoxy-</u>	<u>101-55-3</u>	<u>U030</u>
<u>Brucine</u>	<u>Strychnidin-10-one, 2,3-dimethoxy-</u>	<u>357-57-3</u>	<u>P018</u>
<u>Butyl benzyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester</u>	<u>85-68-7</u>	
<u>Butylate</u>	<u>Carbamothioic acid, bis (2-methylpropyl)-,S-ethyl ester</u>	<u>2008-41-5</u>	
<u>Cacodylic acid</u>	<u>Arsinic acid, dimethyl-</u>	<u>75-60-5</u>	<u>U136</u>
<u>Cadmium</u>	<u>Same</u>	<u>7440-43-9</u>	
<u>Cadmium compounds, N.O.S.¹</u>			
<u>Calcium chromate</u>	<u>Chromic acid H₂CrO₄, calcium salt</u>	<u>13765-19-0</u>	<u>U032</u>
<u>Calcium cyanide</u>	<u>Calcium cyanide Ca(CN)₂</u>	<u>592-01-8</u>	<u>P021</u>
<u>Carbaryl</u>	<u>1-Naphthalenol, methylcarbamate</u>	<u>63-25-2</u>	<u>U279</u>
<u>Carbendazim</u>	<u>Carbamic acid, 1H-benzimidazol-2-yl, methyl ester</u>	<u>10605-21-7</u>	<u>U372</u>
<u>Carbofuran</u>	<u>7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-,methylcarbamate</u>	<u>1563-66-2</u>	<u>P127</u>
<u>Carbofuran phenol</u>	<u>7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-</u>	<u>1563-38-8</u>	<u>U367</u>
<u>Carbon disulfide</u>	<u>Same</u>	<u>75-15-0</u>	<u>P022</u>
<u>Carbon oxyfluoride</u>	<u>Carbonic difluoride</u>	<u>353-50-4</u>	<u>U033</u>
<u>Carbon tetrachloride</u>	<u>Methane, tetrachloro-</u>	<u>56-23-5</u>	<u>U211</u>
<u>Carbosulfan</u>	<u>Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7- benzofuranyl ester</u>	<u>55285-14-8</u>	<u>P189</u>
<u>Chloral</u>	<u>Acetaldehyde, trichloro-</u>	<u>75-87-6</u>	<u>U034</u>
<u>Chlorambucil</u>	<u>Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-</u>	<u>305-03-3</u>	<u>U035</u>
<u>Chlordane</u>	<u>4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7, 7a-hexahydro-</u>	<u>57-74-9</u>	<u>U036</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Chlordane (alpha and gamma isomers)</u>			<u>U036</u>
<u>Chlorinated benzenes, N.O.S.¹</u>			
<u>Chlorinated ethane, N.O.S.¹</u>			
<u>Chlorinated fluorocarbons, N.O.S.¹</u>			
<u>Chlorinated naphthalene, N.O.S.¹</u>			
<u>Chlorinated phenol, N.O.S.¹</u>			
<u>Chlornaphazin</u>	<u>Naphthalenamine, N,N'-bis(2-chloroethyl)-</u>	<u>494-03-1</u>	<u>U026</u>
<u>Chloroacetaldehyde</u>	<u>Acetaldehyde, chloro-</u>	<u>107-20-0</u>	<u>P023</u>
<u>Chloroalkyl ethers, N.O.S.¹</u>			
<u>p-Chloroaniline</u>	<u>Benzenamine, 4-chloro-</u>	<u>106-47-8</u>	<u>P024</u>
<u>Chlorobenzene</u>	<u>Benzene, chloro-</u>	<u>108-90-7</u>	<u>U037</u>
<u>Chlorobenzilate</u>	<u>Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester</u>	<u>510-15-6</u>	<u>U038</u>
<u>p-Chloro-m-cresol</u>	<u>Phenol, 4-chloro-3-methyl-</u>	<u>59-50-7</u>	<u>U039</u>
<u>2-Chloroethyl vinyl ether</u>	<u>Ethene, (2-chloroethoxy)-</u>	<u>110-75-8</u>	<u>U042</u>
<u>Chloroform</u>	<u>Methane, trichloro-</u>	<u>67-66-3</u>	<u>U044</u>
<u>Chloromethyl methyl ether</u>	<u>Methane, chloromethoxy-</u>	<u>107-30-2</u>	<u>U046</u>
<u>beta-Chloronaphthalene</u>	<u>Naphthalene, 2-chloro-</u>	<u>91-58-7</u>	<u>U047</u>
<u>o-Chlorophenol</u>	<u>Phenol, 2-chloro-</u>	<u>95-57-8</u>	<u>U048</u>
<u>1-(O-Chlorophenyl)thiourea</u>	<u>Thiourea, (2-chlorophenyl)-</u>	<u>5344-82-1</u>	<u>P026</u>
<u>Chloroprene</u>	<u>1,3-Butadiene, 2-chloro-</u>	<u>126-99-8</u>	
<u>3-Chloropropionitrile</u>	<u>Propanenitrile, 3-chloro-</u>	<u>542-76-7</u>	<u>P027</u>
<u>Chromium</u>	<u>Same</u>	<u>7440-47-3</u>	
<u>Chromium compounds, N.O.S.¹</u>			
<u>Chrysene</u>	<u>Same</u>	<u>218-01-9</u>	<u>U050</u>
<u>Citrus red No. 2</u>	<u>2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-</u>	<u>6358-53-8</u>	
<u>Coal tar creosote</u>	<u>Same</u>	<u>8007-45-2</u>	
<u>Copper cyanide</u>	<u>Copper cyanide CuCN</u>	<u>544-92-3</u>	<u>P029</u>
<u>Copper dimethyldithiocarbamate</u>	<u>Copper, bis(dimethylcarbamo-dithioato-S,S')-,</u>	<u>137-29-1</u>	
<u>Cresote</u>	<u>Same</u>		<u>U051</u>
<u>p-Cresidine</u>	<u>2-Methoxy-5-methylbenzenamine</u>	<u>120-71-8</u>	
<u>Cresol (Cresylic acid)</u>	<u>Phenol, methyl-</u>	<u>1319-77-3</u>	<u>U052</u>
<u>Crotonaldehyde</u>	<u>2-Butenal</u>	<u>4170-30-3</u>	<u>U053</u>
<u>m-Cumenyl methylcarbamate</u>	<u>Phenol, 3-(methylethyl)-, methyl carbamate</u>	<u>64-00-6</u>	<u>P202</u>
<u>Cyanides (soluble salts and complexes) N.O.S.¹</u>			<u>P030</u>
<u>Cyanogen</u>	<u>Ethanedinitrile</u>	<u>460-19-5</u>	<u>P031</u>
<u>Cyanogen bromide</u>	<u>Cyanogen bromide (CN)Br</u>	<u>506-68-3</u>	<u>U246</u>
<u>Cyanogen chloride</u>	<u>Cyanogen chloride (CN)Cl</u>	<u>506-77-4</u>	<u>P033</u>
<u>Cycasin</u>	<u>beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl</u>	<u>14901-08-7</u>	
<u>Cycloate</u>	<u>Carbamothioic acid, cyclophexylethyl-, S-ethyl ester</u>	<u>1134-23-2</u>	
<u>2-Cyclohexyl-4,6-dinitrophenol</u>	<u>Phenol, 2-cyclohexyl-4,6-dinitro-</u>	<u>131-89-5</u>	<u>P034</u>
<u>Cyclophosphamide</u>	<u>2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide</u>	<u>50-18-0</u>	<u>U058</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>2,4-D</u>	<u>Acetic acid, (2,4-dichlorophenoxy)-</u>	<u>94-75-7</u>	<u>U240</u>
<u>2,4-D, salts, esters</u>			<u>U240</u>
<u>Daunomycin</u>	<u>5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo- hexo pyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-</u>	<u>20830-81-3</u>	<u>U059</u>
<u>DDD</u>	<u>Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-</u>	<u>72-54-8</u>	<u>U060</u>
<u>DDE</u>	<u>Benzene, 1,1'-dichloroethenylidene)bis[4-chloro-</u>	<u>72-55-9</u>	
<u>DDT</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-</u>	<u>50-29-3</u>	<u>U061</u>
<u>Dazomet</u>	<u>2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl</u>	<u>533-74-4</u>	
<u>Diallate</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S(2,3-dichloro-2-propenyl) ester</u>	<u>2303-16-4</u>	<u>U062</u>
<u>Dibenz[a,h]acridine</u>	<u>Same</u>	<u>226-36-8</u>	
<u>Dibenz[a,i]acridine</u>	<u>Same</u>	<u>224-42-0</u>	
<u>Dibenz[a,h]anthracene</u>	<u>Same</u>	<u>53-70-3</u>	<u>U063</u>
<u>7H-Dibenzo[c,g]carbazole</u>	<u>Same</u>	<u>194-59-2</u>	
<u>Dibenzo[a,e]pyrene</u>	<u>Naphtho[1,2,3,4-def]chrysene</u>	<u>192-65-4</u>	
<u>Dibenzo[a,h]pyrene</u>	<u>Dibenzo[b,def]chrysene</u>	<u>189-64-0</u>	
<u>Dibenzo[a,i]pyrene</u>	<u>Benzo[rst]pentaphene</u>	<u>189-55-9</u>	<u>U064</u>
<u>1,2-Dibromo-3-chloropropane</u>	<u>Propane, 1,2-dibromo-3-chloro-</u>	<u>96-12-8</u>	<u>U066</u>
<u>Dibutyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, dibutyl ester</u>	<u>84-74-2</u>	<u>U069</u>
<u>o-Dichlorobenzene</u>	<u>Benzene, 1,2-dichloro-</u>	<u>95-50-1</u>	<u>U070</u>
<u>m-Dichlorobenzene</u>	<u>Benzene, 1,3-dichloro-</u>	<u>541-73-1</u>	<u>U071</u>
<u>p-Dichlorobenzene</u>	<u>Benzene, 1,4-dichloro-</u>	<u>106-46-7</u>	<u>U072</u>
<u>Dichlorobenzene, N.O.S.¹</u>	<u>Benzene, dichloro-</u>	<u>25321-22-6</u>	
<u>3,3'-Dichlorobenzidine</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-</u>	<u>91-94-1</u>	<u>U073</u>
<u>1,4-Dichloro-2-butene</u>	<u>2-Butene, 1,4-dichloro-</u>	<u>764-41-0</u>	<u>U074</u>
<u>Dichlorodifluoromethane</u>	<u>Methane, dichlorodifluoro-</u>	<u>75-71-8</u>	<u>U075</u>
<u>Dichloroethylene, N.O.S.¹</u>	<u>Dichloroethylene</u>	<u>25323-30-2</u>	
<u>1,1-Dichloroethylene</u>	<u>Ethene, 1,1-dichloro-</u>	<u>75-35-4</u>	<u>U078</u>
<u>1,2-Dichloroethylene</u>	<u>Ethene, 1,2-dichloro-, (E)-</u>	<u>156-60-5</u>	<u>U079</u>
<u>Dichloroethyl ether</u>	<u>Ethane, 1,1'-oxybis[2-chloro-</u>	<u>111-44-4</u>	<u>U025</u>
<u>Dichloroisopropyl ether</u>	<u>Propane, 2,2'-oxybis[2-chloro-</u>	<u>108-60-1</u>	<u>U027</u>
<u>Dichloromethoxy ethane</u>	<u>Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-</u>	<u>111-91-1</u>	<u>U024</u>
<u>Dichloromethyl ether</u>	<u>Methane, oxybis[chloro-</u>	<u>542-88-1</u>	<u>P016</u>
<u>2,4-Dichlorophenol</u>	<u>Phenol, 2,4-dichloro-</u>	<u>120-83-2</u>	<u>U081</u>
<u>2,6-Dichlorophenol</u>	<u>Phenol, 2,6-dichloro-</u>	<u>87-65-0</u>	<u>U082</u>
<u>Dichlorophenylarsine</u>	<u>Arsonous dichloride, phenyl-</u>	<u>696-28-6</u>	<u>P036</u>
<u>Dichloropropane, N.O.S.¹</u>	<u>Propane, dichloro-</u>	<u>26638-19-7</u>	
<u>Dichloropropanol, N.O.S.¹</u>	<u>Propanol, dichloro-</u>	<u>26545-73-3</u>	
<u>Dichloropropene, N.O.S.¹</u>	<u>1-Propene, dichloro-</u>	<u>26952-23-8</u>	
<u>1,3-Dichloropropene</u>	<u>1-Propene, 1,3-dichloro-</u>	<u>542-75-6</u>	<u>U084</u>
<u>Dieldrin</u>	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-</u>	<u>60-57-1</u>	<u>P037</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>1,2:3,4-Diepoxybutane</u>	<u>2,2'-Bioxirane</u>	<u>1464-53-5</u>	<u>U085</u>
<u>Diethylarsine</u>	<u>Arsine, diethyl-</u>	<u>692-42-2</u>	<u>P038</u>
<u>Diethylene glycol, dicarbamate</u>	<u>Ethanol, 2,2'-oxybis-, dicarbamate</u>	<u>5952-26-1</u>	<u>U395</u>
<u>1,4-Diethyleneoxide</u>	<u>1,4-Dioxane</u>	<u>123-91-1</u>	<u>U108</u>
<u>Diethylhexyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester</u>	<u>117-81-7</u>	<u>U028</u>
<u>N,N'-Diethylhydrazine</u>	<u>Hydrazine, 1,2-diethyl-</u>	<u>1615-80-1</u>	<u>U086</u>
<u>O,O-Diethyl S-methyl dithiophosphate</u>	<u>Phosphorodithioic acid, O,O-diethyl S-methyl ester</u>	<u>3288-58-2</u>	<u>U087</u>
<u>Diethyl-p-nitrophenyl phosphate</u>	<u>Phosphoric acid, diethyl 4-nitrophenyl ester</u>	<u>311-45-5</u>	<u>P041</u>
<u>Diethyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, diethyl ester</u>	<u>84-66-2</u>	<u>U088</u>
<u>O,O-Diethyl O-pyrazinyl phosphoro- thioate</u>	<u>Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester</u>	<u>297-97-2</u>	<u>P040</u>
<u>Diethylstilbesterol</u>	<u>Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-</u>	<u>56-53-1</u>	<u>U089</u>
<u>Dihydrosafrole</u>	<u>1,3-Benzodioxole, 5-propyl-</u>	<u>94-58-6</u>	<u>U090</u>
<u>Diisopropylfluorophosphate (DFP)</u>	<u>Phosphorofluoric acid, bis(1-methylethyl) ester</u>	<u>55-91-4</u>	<u>P043</u>
<u>Dimethoate</u>	<u>Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester</u>	<u>60-51-5</u>	<u>P044</u>
<u>3,3'-Dimethoxybenzidine</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-</u>	<u>119-90-4</u>	<u>U091</u>
<u>p-Dimethylaminoazobenzene</u>	<u>Benzenamine, N,N-dimethyl-4-(phenylazo)-</u>	<u>60-11-7</u>	<u>U093</u>
<u>2,4-Dimethylaniline (2,4-xyldine)</u>	<u>Benzenamine, 2,4-dimethyl-</u>	<u>95-68-1</u>	
<u>7,12-Dimethylbenz[a]anthracene</u>	<u>Benz[a]anthracene, 7,12-dimethyl-</u>	<u>57-97-6</u>	<u>U094</u>
<u>3,3'-Dimethylbenzidine</u>	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-</u>	<u>119-93-7</u>	<u>U095</u>
<u>Dimethylcarbamoyl chloride</u>	<u>Carbamic chloride, dimethyl-</u>	<u>79-44-7</u>	<u>U097</u>
<u>1,1-Dimethylhydrazine</u>	<u>Hydrazine, 1,1-dimethyl-</u>	<u>57-14-7</u>	<u>U098</u>
<u>1,2-Dimethylhydrazine</u>	<u>Hydrazine, 1,2-dimethyl-</u>	<u>540-73-8</u>	<u>U099</u>
<u>alpha, alpha-Dimethylphenethylamine</u>	<u>Benzenethanamine, alpha, alpha-dimethyl-</u>	<u>122-09-8</u>	<u>P046</u>
<u>2,4-Dimethylphenol</u>	<u>Phenol, 2,4-dimethyl-</u>	<u>105-67-9</u>	<u>U101</u>
<u>Dimethyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, dimethyl ester</u>	<u>131-11-3</u>	<u>U102</u>
<u>Dimethyl sulfate</u>	<u>Sulfuric acid, dimethyl ester</u>	<u>77-78-1</u>	<u>U103</u>
<u>Dimetilan</u>	<u>Carbamic acid, dimethyl-, 1- [(dimethylamino)carbonyl]-5-methyl-1H-pyrazol- 3-yl ester</u>	<u>644-64-4</u>	<u>P191</u>
<u>Dinitrobenzene, N.O.S.¹</u>	<u>Benzene, dinitro-</u>	<u>25154-54-5</u>	
<u>4,6-Dinitro-o-cresol</u>	<u>Phenol, 2-methyl-4,6-dinitro-</u>	<u>534-52-1</u>	<u>P047</u>
<u>4,6-Dintro-o-cresol salts</u>			<u>P047</u>
<u>2,4-Dinitrophenol</u>	<u>Phenol, 2,4-dinitro-</u>	<u>51-28-5</u>	<u>P048</u>
<u>2,4-Dinitrotoluene</u>	<u>Benzene, 1-methyl-2,4-dinitro-</u>	<u>121-14-2</u>	<u>U105</u>
<u>2,6-Dinitrotoluene</u>	<u>Benzene, 2-methyl-1,3-dinitro-</u>	<u>606-20-2</u>	<u>U106</u>
<u>Dinoseb</u>	<u>Phenol, 2-(1-methylpropyl)-4,6-dinitro-</u>	<u>88-85-7</u>	<u>P020</u>
<u>Di-n-octyl phthalate</u>	<u>1,2-Benzenedicarboxylic acid, dioctyl ester</u>	<u>117-84-0</u>	<u>U017</u>
<u>Diphenylamine</u>	<u>Benzenamine, N-phenyl-</u>	<u>122-39-4</u>	
<u>1,2-Diphenylhydrazine</u>	<u>Hydrazine, 1,2-diphenyl-</u>	<u>122-66-7</u>	<u>U109</u>
<u>Di-n-propylnitrosamine</u>	<u>1-Propanamine, N-nitroso-N-propyl-</u>	<u>621-64-7</u>	<u>U111</u>
<u>Disulfiram</u>	<u>Thioperoxydicarbonic diamide, tetraethyl</u>	<u>97-77-8</u>	
<u>Disulfoton</u>	<u>Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester</u>	<u>298-04-4</u>	<u>P039</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Dithiobiuret</u>	<u>Thioimidodicarbonic diamide [(H₂N)C(S)]₂NH</u>	<u>541-53-7</u>	<u>P049</u>
<u>EPTC</u>	<u>Carbamothioic acid, dipropyl-, S-ethyl ester</u>	<u>759-94-4</u>	
<u>Endosulfan</u>	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9, 9a-hexahydro-, 3-oxide</u>	<u>115-29-7</u>	<u>P050</u>
<u>Endothall</u>	<u>7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid</u>	<u>145-73-3</u>	<u>P088</u>
<u>Endrin</u>	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7, 7a-octahydro-, (1aalpha,2beta,2beta,3alpha, 6alpha,6beta,7beta,7aalpha)-</u>	<u>72-20-8</u>	<u>P051</u>
<u>Endrin metabolites</u>			<u>P051</u>
<u>Epichlorohydrin</u>	<u>Oxirane, (chloromethyl)-</u>	<u>106-89-8</u>	<u>U041</u>
<u>Epinephrine</u>	<u>1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-</u>	<u>51-43-4</u>	<u>P042</u>
<u>Ethyl carbamate (urethane)</u>	<u>Carbamic acid, ethyl ester</u>	<u>51-79-6</u>	<u>U238</u>
<u>Ethyl cyanide</u>	<u>Propanenitrile</u>	<u>107-12-0</u>	<u>P101</u>
<u>Ethyl Ziram</u>	<u>Zinc, bis(diethylcarbamodithioato-S,S')-</u>	<u>14324-55-1</u>	
<u>Ethylenebisdithiocarbamic acid</u>	<u>Carbamodithioic acid, 1,2-ethanedivylbis-</u>	<u>111-54-6</u>	<u>U114</u>
<u>Ethylenebisdithiocarbamic acid, salts and esters</u>			<u>U114</u>
<u>Ethylene dibromide</u>	<u>Ethane, 1,2-dibromo-</u>	<u>106-93-4</u>	<u>U067</u>
<u>Ethylene dichloride</u>	<u>Ethane, 1,2-dichloro-</u>	<u>107-06-2</u>	<u>U077</u>
<u>Ethylene glycol monoethyl ether</u>	<u>Ethanol, 2-ethoxy-</u>	<u>110-80-5</u>	<u>U359</u>
<u>Ethyleneimine</u>	<u>Aziridine</u>	<u>151-56-4</u>	<u>P054</u>
<u>Ethylene oxide</u>	<u>Oxirane</u>	<u>75-21-8</u>	<u>U115</u>
<u>Ethylenethiourea</u>	<u>2-Imidazolidinethione</u>	<u>96-45-7</u>	<u>U116</u>
<u>Ethylidene dichloride</u>	<u>Ethane, 1,1-dichloro-</u>	<u>75-34-3</u>	<u>U076</u>
<u>Ethyl methacrylate</u>	<u>2-Propenoic acid, 2-methyl-, ethyl ester</u>	<u>97-63-2</u>	<u>U118</u>
<u>Ethyl methanesulfonate</u>	<u>Methanesulfonic acid, ethyl ester</u>	<u>62-50-0</u>	<u>U119</u>
<u>Famphur</u>	<u>Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester</u>	<u>52-85-7</u>	<u>P097</u>
<u>Ferbam</u>	<u>Iron, tris(dimethylcarbamodithioato-S,S')-</u>	<u>14484-64-1</u>	
<u>Fluoranthene</u>	<u>Same</u>	<u>206-44-0</u>	<u>U120</u>
<u>Fluorine</u>	<u>Same</u>	<u>7782-41-4</u>	<u>P056</u>
<u>Fluoroacetamide</u>	<u>Acetamide, 2-fluoro-</u>	<u>640-19-7</u>	<u>P057</u>
<u>Fluoroacetic acid, sodium salt</u>	<u>Acetic acid, fluoro-, sodium salt</u>	<u>62-74-8</u>	<u>P058</u>
<u>Formaldehyde</u>	<u>Same</u>	<u>50-00-0</u>	<u>U122</u>
<u>Formetanate hydrochloride</u>	<u>Methanimidamide, N,N-dimethyl-N'-[3-[(methylamino)carbonyl]oxy]phenyl]-, monohydrochloride</u>	<u>23422-53-9</u>	<u>P198</u>
<u>Formic acid</u>	<u>Same</u>	<u>64-18-6</u>	<u>U123</u>
<u>Formparante</u>	<u>Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[(methylamino)carbonyl]oxy]phenyl]-</u>	<u>17702-57-7</u>	<u>p197</u>
<u>Glycidylaldehyde</u>	<u>Oxiranecarboxyaldehyde</u>	<u>765-34-4</u>	<u>U126</u>
<u>Halomethanes, N.O.S.¹</u>			
<u>Heptachlor</u>	<u>4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-</u>	<u>76-44-8</u>	<u>P059</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Heptachlor epoxide</u>	<u>2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexa-hydro-, (1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)-</u>	<u>1024-57-3</u>	
<u>Heptachlor epoxide (alpha, beta, and gamma isomers)</u>			
<u>Heptachlorodibenzofurans</u>			
<u>Heptachlorodibenzo-p-dioxins</u>			
<u>Hexachlorobenzene</u>	<u>Benzene, hexachloro-</u>	<u>118-74-1</u>	<u>U127</u>
<u>Hexachlorobutadiene</u>	<u>1,3-Butadiene, 1,1,2,3,4,4-hexachloro-</u>	<u>87-68-3</u>	<u>U128</u>
<u>Hexachlorocyclopentadiene</u>	<u>1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-</u>	<u>77-47-4</u>	<u>U130</u>
<u>Hexachlorodibenzo-p-dioxins</u>			
<u>Hexachlorodibenzofurans</u>			
<u>Hexachloroethane</u>	<u>Ethane, hexachloro-</u>	<u>67-72-1</u>	<u>U131</u>
<u>Hexachlorophene</u>	<u>Phenol, 2,2'-methylenebis[3,4,6-trichloro-</u>	<u>70-30-4</u>	<u>U132</u>
<u>Hexachloropropene</u>	<u>1-Propene, 1,1,2,3,3,3-hexachloro-</u>	<u>1888-71-7</u>	<u>U243</u>
<u>Hexaethyl tetraphosphate</u>	<u>Tetraphosphoric acid, hexaethyl ester</u>	<u>757-58-4</u>	<u>P062</u>
<u>Hydrazine</u>	<u>Same</u>	<u>302-01-2</u>	<u>U133</u>
<u>Hydrogen cyanide</u>	<u>Hydrocyanic acid</u>	<u>74-90-8</u>	<u>P063</u>
<u>Hydrogen fluoride</u>	<u>Hydrofluoric acid</u>	<u>7664-39-3</u>	<u>U134</u>
<u>Hydrogen sulfide</u>	<u>Hydrogen sulfide H₂S</u>	<u>7783-06-4</u>	<u>U135</u>
<u>Indeno[1,2,3-cd]pyrene</u>	<u>Same</u>	<u>193-39-5</u>	<u>U137</u>
<u>3-Iodo-2-propynyl n-butylcarbamate</u>	<u>Carbamic acid, butyl-, 3-iodo-2-propynyl ester</u>	<u>55406-53-6</u>	
<u>Isobutyl alcohol</u>	<u>1-Propanol, 2-methyl-</u>	<u>78-83-1</u>	<u>U140</u>
<u>Isodrin</u>	<u>1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro,(1alpha,4alpha,4abeta,5beta,8beta,-8abeta) -</u>	<u>465-73-6</u>	<u>P060</u>
<u>Isolan</u>	<u>Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester</u>	<u>119-38-0</u>	<u>P192</u>
<u>Isosafrole</u>	<u>1,3-Benzodioxole, 5-(1-propenyl)-</u>	<u>120-58-1</u>	<u>U141</u>
<u>Kepone</u>	<u>1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-</u>	<u>143-50-0</u>	<u>U142</u>
<u>Lasiocarpine</u>	<u>2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]menthyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-</u>	<u>303-34-4</u>	<u>U143</u>
<u>Lead</u>	<u>Same</u>	<u>7439-92-1</u>	
<u>Lead compounds, N.O.S.¹</u>			
<u>Lead acetate</u>	<u>Acetic acid, lead(2+) salt</u>	<u>301-04-2</u>	<u>U144</u>
<u>Lead phosphate</u>	<u>Phosphoric acid, lead(2+) salt (2:3)</u>	<u>7446-27-7</u>	<u>U145</u>
<u>Lead subacetate</u>	<u>Lead, bis(acetato-O)tetrahydroxytri-</u>	<u>1335-32-6</u>	<u>U146</u>
<u>Lindane</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-</u>	<u>58-89-9</u>	<u>U129</u>
<u>Maleic anhydride</u>	<u>2,5-Furandione</u>	<u>108-31-6</u>	<u>U147</u>
<u>Maleic hydrazide</u>	<u>3,6-Pyridazinedione, 1,2-dihydro-</u>	<u>123-33-1</u>	<u>U148</u>
<u>Malononitrile</u>	<u>Propanedinitrile</u>	<u>109-77-3</u>	<u>U149</u>
<u>Manganese dimethyldithiocarbamate</u>	<u>Manganese, bis(dimethylcarbamodithioato-S,S')-</u>	<u>15339-36-3</u>	<u>P196</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Melphalan</u>	<u>L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-</u>	<u>148-82-3</u>	<u>U150</u>
<u>Mercury</u>	<u>Same</u>	<u>7439-97-6</u>	<u>U151</u>
<u>Mercury compounds, N.O.S.¹</u>			
<u>Mercury fulminate</u>	<u>Fulminic acid, mercury(2+) salt</u>	<u>628-86-4</u>	<u>P065</u>
<u>Metam Sodium</u>	<u>Carbamodithioic acid, methyl-, monosodium salt</u>	<u>137-42-8</u>	
<u>Methacrylonitrile</u>	<u>2-Propenenitrile, 2-methyl-</u>	<u>126-98-7</u>	<u>U152</u>
<u>Methapyrilene</u>	<u>1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-</u>	<u>91-80-5</u>	<u>U155</u>
<u>Methiocarb</u>	<u>Phenol, (3,5-dimethyl-4-(methylthio)-,methylcarbamate</u>	<u>2032-65-7</u>	<u>P199</u>
<u>Methomyl</u>	<u>Ethanimidodithioic acid, N-[(methylamino)carbonyloxy]-, methyl ester</u>	<u>16752-77-5</u>	<u>P066</u>
<u>Methoxychlor</u>	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-</u>	<u>72-43-5</u>	<u>U247</u>
<u>Methyl bromide</u>	<u>Methane, bromo-</u>	<u>74-83-9</u>	<u>U029</u>
<u>Methyl chloride</u>	<u>Methane, chloro-</u>	<u>74-87-3</u>	<u>U045</u>
<u>Methyl chlorocarbonate</u>	<u>Carbonochloridic acid, methyl ester</u>	<u>79-22-1</u>	<u>U156</u>
<u>Methyl chloroform</u>	<u>Ethane, 1,1,1-trichloro-</u>	<u>71-55-6</u>	<u>U226</u>
<u>3-Methylcholanthrene</u>	<u>Benz[<i>a</i>]aceanthrylene, 1,2-dihydro-3-methyl-</u>	<u>56-49-5</u>	<u>U157</u>
<u>4,4'-Methylenebis (2-chloroaniline)</u>	<u>Benzenamine, 4,4'-methylenebis[2-chloro-</u>	<u>101-14-4</u>	<u>U158</u>
<u>Methylene bromide</u>	<u>Methane, dibromo-</u>	<u>74-95-3</u>	<u>U068</u>
<u>Methylene chloride</u>	<u>Methane, dichloro-</u>	<u>75-09-2</u>	<u>U080</u>
<u>Methyl ethyl ketone (MEK)</u>	<u>2-Butanone</u>	<u>78-93-3</u>	<u>U159</u>
<u>Methyl ethyl ketone peroxide</u>	<u>2-Butanone, peroxide</u>	<u>1338-23-4</u>	<u>U160</u>
<u>Methyl hydrazine</u>	<u>Hydrazine, methyl-</u>	<u>60-34-4</u>	<u>P068</u>
<u>Methyl iodide</u>	<u>Methane, iodo-</u>	<u>74-88-4</u>	<u>U138</u>
<u>Methyl isocyanate</u>	<u>Methane, isocyanato-</u>	<u>624-83-9</u>	<u>P064</u>
<u>2-Methylactonitrile</u>	<u>Propanenitrile, 2-hydroxy-2-methyl-</u>	<u>75-86-5</u>	<u>P069</u>
<u>Methyl methacrylate</u>	<u>2-Propenoic acid, 2-methyl-, methyl ester</u>	<u>80-62-6</u>	<u>U162</u>
<u>Methyl methanesulfonate</u>	<u>Methanesulfonic acid, methyl ester</u>	<u>66-27-3</u>	
<u>Methyl parathion</u>	<u>Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester</u>	<u>298-00-0</u>	<u>P071</u>
<u>Methylthiouracil</u>	<u>4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-</u>	<u>56-04-2</u>	<u>U164</u>
<u>Metolcarb</u>	<u>Carbamic acid, methyl-, 3-methylphenyl ester</u>	<u>1129-41-5</u>	<u>P190</u>
<u>Mexacarbate</u>	<u>Phenol, 4-(dimethylamino)-3,5-dimethyl-,methylcarbamate (ester)</u>	<u>315-18-4</u>	<u>P128</u>
<u>Mitomycin C</u>	<u>Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[aminocarbonyloxy]methyl]- 1,1a,2,8,8a,8b -hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta,8alpha,8balpha)]-</u>	<u>50-07-7</u>	<u>U010</u>
<u>MNNG</u>	<u>Guanidine, N-methyl-N'-nitro-N-nitroso-</u>	<u>70-25-7</u>	<u>U163</u>
<u>Molinate</u>	<u>1H-Azepine-1-carbothioic acid, hexahydro-, S- ethyl ester</u>	<u>2212-67-1</u>	
<u>Mustard gas</u>	<u>Ethane, 1,1'-thiobis[2-chloro-</u>	<u>505-60-2</u>	
<u>Naphthalene</u>	<u>Same</u>	<u>91-20-3</u>	<u>U165</u>
<u>1,4-Naphthoquinone</u>	<u>1,4-Naphthalenedione</u>	<u>130-15-4</u>	<u>U166</u>
<u>alpha-Naphthylamine</u>	<u>1-Naphthalenamine</u>	<u>134-32-7</u>	<u>U167</u>
<u>beta-Naphthylamine</u>	<u>2-Naphthalenamine</u>	<u>91-59-8</u>	<u>U168</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>alpha-Naphthylthiourea</u>	<u>Thiourea, 1-naphthalenyl-</u>	<u>86-88-4</u>	<u>P072</u>
<u>Nickel</u>	<u>Same</u>	<u>7440-02-0</u>	
<u>Nickel compounds, N.O.S.¹</u>			
<u>Nickel carbonyl</u>	<u>Nickel carbonyl Ni(CO)₄, (T-4)-</u>	<u>13463-39-3</u>	<u>P073</u>
<u>Nickel cyanide</u>	<u>Nickel cyanide Ni(CN)₂</u>	<u>557-19-7</u>	<u>P074</u>
<u>Nicotine</u>	<u>Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-</u>	<u>54-11-5</u>	<u>P075</u>
<u>Nicotine salts</u>			<u>P075</u>
<u>Nitric oxide</u>	<u>Nitrogen oxide NO</u>	<u>10102-43-9</u>	<u>P076</u>
<u>p-Nitroaniline</u>	<u>Benzenamine, 4-nitro-</u>	<u>100-01-6</u>	<u>P077</u>
<u>Nitrobenzene</u>	<u>Benzene, nitro-</u>	<u>98-95-3</u>	<u>U169</u>
<u>Nitrogen dioxide</u>	<u>Nitrogen oxide NO₂</u>	<u>10102-44-0</u>	<u>P078</u>
<u>Nitrogen mustard</u>	<u>Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-</u>	<u>51-75-2</u>	
<u>Nitrogen mustard, hydrochloride salt</u>			
<u>Nitrogen mustard N-oxide</u>	<u>Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide</u>	<u>126-85-2</u>	
<u>Nitrogen mustard, N-oxide, hydrochloride salt</u>			
<u>Nitroglycerin</u>	<u>1,2,3-Propanetriol, trinitrate</u>	<u>55-63-0</u>	<u>P081</u>
<u>p-Nitrophenol</u>	<u>Phenol, 4-nitro-</u>	<u>100-02-7</u>	<u>U170</u>
<u>2-Nitropropane</u>	<u>Propane, 2-nitro-</u>	<u>79-46-9</u>	<u>U171</u>
<u>Nitrosamines, N.O.S.¹</u>		<u>35576-91-1</u>	
<u>N-Nitrosodi-n-butylamine</u>	<u>1-Butanamine, N-butyl-N-nitroso-</u>	<u>924-16-3</u>	<u>U172</u>
<u>N-Nitrosodiethanolamine</u>	<u>Ethanol, 2,2'-(nitrosoimino)bis-</u>	<u>1116-54-7</u>	<u>U173</u>
<u>N-Nitrosodiethylamine</u>	<u>Ethanamine, N-ethyl-N-nitroso-</u>	<u>55-18-5</u>	<u>U174</u>
<u>N-Nitrosodimethylamine</u>	<u>Methanamine, N-methyl-N-nitroso-</u>	<u>62-75-9</u>	<u>PO82</u>
<u>N-Nitroso-N-ethylurea</u>	<u>Urea, N-ethyl-N-nitroso-</u>	<u>759-73-9</u>	<u>U176</u>
<u>N-Nitrosomethylethylamine</u>	<u>Ethanamine, N-methyl-N-nitroso-</u>	<u>10595-95-6</u>	
<u>N-Nitroso-N-methylurea</u>	<u>Urea, N-methyl-N-nitroso-</u>	<u>684-93-5</u>	<u>U177</u>
<u>N-Nitroso-N-methylurethane</u>	<u>Carbamic acid, methylnitroso-, ethyl ester</u>	<u>615-53-2</u>	<u>U178</u>
<u>N-Nitrosomethylvinylamine</u>	<u>Vinylamine, N-methyl-N-nitroso-</u>	<u>4549-40-0</u>	<u>P084</u>
<u>N-Nitrosomorpholine</u>	<u>Morpholine, 4-nitroso-</u>	<u>59-89-2</u>	
<u>N-Nitrosornicotine</u>	<u>Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-</u>	<u>16543-55-8</u>	
<u>N-Nitrosopiperidine</u>	<u>Piperidine, 1-nitroso-</u>	<u>100-75-4</u>	<u>U179</u>
<u>N-Nitrosopyrrolidine</u>	<u>Pyrrolidine, 1-nitroso-</u>	<u>93055-2</u>	<u>U180</u>
<u>N-Nitrososarcosine</u>	<u>Glycine, N-methyl-N-nitroso-</u>	<u>13256-22-9</u>	
<u>5-Nitro-o-toluidine</u>	<u>Benzenamine, 2-methyl-5-nitro-</u>	<u>99-55-8</u>	<u>U181</u>
<u>Octachlorodibenzo-p-dioxin (OCDD)</u>	<u>1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin</u>	<u>3268-87-9</u>	
<u>Octachlorodibenzofuran (OCDF)</u>	<u>1,2,3,4,6,7,8,9-Octachlorodibenzofuran</u>	<u>39001-02-0</u>	
<u>Octamethylpyrophosphoramidate</u>	<u>Diphosphoramidate, octamethyl-</u>	<u>152-16-9</u>	<u>P085</u>
<u>Osmium tetroxide</u>	<u>Osmium oxide OsO₄, (T-4)-</u>	<u>20816-12-0</u>	<u>P087</u>
<u>Oxamyl</u>	<u>Ethanimidothioic acid, 2-(dimethylamino)-N-[(methylamino)carbonyloxy]-2-oxo-, methyl ester</u>	<u>23135-22-0</u>	<u>P194</u>
<u>Paraldehyde</u>	<u>1,3,5-Trioxane, 2,4,6-trimethyl-</u>	<u>123-63-7</u>	<u>U182</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Parathion</u>	<u>Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester</u>	<u>56-38-2</u>	<u>P089</u>
<u>Pebulate</u>	<u>Carbamothioic acid, butylethyl-, S-propyl ester</u>	<u>1114-71-2</u>	
<u>Pentachlorobenzene</u>	<u>Benzene, pentachloro-</u>	<u>608-93-5</u>	<u>U183</u>
<u>Pentachlorodibenzo-p-dioxins</u>			
<u>Pentachlorodibenzofurans</u>			
<u>Pentachloroethane</u>	<u>Ethane, pentachloro-</u>	<u>76-01-7</u>	<u>U184</u>
<u>Pentachloronitrobenzene (PCNB)</u>	<u>Benzene, pentachloronitro-</u>	<u>82-68-8</u>	<u>U185</u>
<u>Pentachlorophenol</u>	<u>Phenol, pentachloro-</u>	<u>87-86-5</u>	<u>See F027</u>
<u>Phenacetin</u>	<u>Acetamide, N-(4-ethoxyphenyl)-</u>	<u>62-44-2</u>	<u>U187</u>
<u>Phenol</u>	<u>Same</u>	<u>108-95-2</u>	<u>U188</u>
<u>Phenylenediamine</u>	<u>Benzenediamine</u>	<u>25265-76-3</u>	
<u>1,2-Phenylenediamine</u>	<u>1,2-Benzenediamine</u>	<u>95-54-5</u>	
<u>1,3-Phenylenediamine</u>	<u>1,3-Benzenediamine</u>	<u>108-45-2</u>	
<u>Phenylmercury acetate</u>	<u>Mercury, (acetato-O)phenyl-</u>	<u>62-38-4</u>	<u>P092</u>
<u>Phenylthiourea</u>	<u>Thiourea, phenyl-</u>	<u>103-85-5</u>	<u>P093</u>
<u>Phosgene</u>	<u>Carbonic dichloride</u>	<u>75-44-5</u>	<u>P095</u>
<u>Phosphine</u>	<u>Same</u>	<u>7803-51-2</u>	<u>P096</u>
<u>Phorate</u>	<u>Phosphorodithioic acid, O,O-diethyl S-(ethylthio)methyl ester</u>	<u>298-02-2</u>	<u>P094</u>
<u>Phthalic acid esters, N.O.S.¹</u>			
<u>Phthalic anhydride</u>	<u>1,3-Isobenzofurandione</u>	<u>85-44-9</u>	<u>U190</u>
<u>Physostigmine</u>	<u>Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-</u>	<u>57-47-6</u>	<u>P204</u>
<u>Physostigmine salicylate</u>	<u>Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a, 8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1).</u>	<u>57-64-7</u>	<u>P188</u>
<u>2-Picoline</u>	<u>Pyridine, 2-methyl-</u>	<u>109-06-8</u>	<u>U191</u>
<u>Polychlorinated biphenyls, N.O.S.¹</u>			
<u>Potassium cyanide</u>	<u>Potassium cyanide K(CN)</u>	<u>151-50-8</u>	<u>P098</u>
<u>Potassium dimethyl-dithiocarbamate</u>	<u>Carbamodithioic acid, dimethyl, potassium salt</u>	<u>128-03-0</u>	
<u>Potassium n-hydroxymethyl-n-methyl- dithiocarbamate</u>	<u>Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt</u>	<u>51026-28-9</u>	
<u>Potassium n-methyldithiocarbamate</u>	<u>Carbamodithioic acid, methyl-monopotassium salt</u>	<u>137-41-7</u>	<u>U377</u>
<u>Potassium pentachlorophenate</u>	<u>Pentachlorophenol, potassium salt</u>	<u>7778-73-6</u>	
<u>Potassium silver cyanide</u>	<u>Argentate(1-), bis(cyano-C)-, potassium</u>	<u>506-61-6</u>	<u>P099</u>
<u>Promecarb</u>	<u>Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate</u>	<u>2631-37-0</u>	<u>P201</u>
<u>Pronamide</u>	<u>Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-</u>	<u>23950-58-5</u>	<u>U192</u>
<u>1,3-Propane sultone</u>	<u>1,2-Oxathiolane, 2,2-dioxide</u>	<u>1120-71-4</u>	<u>U193</u>
<u>Propham</u>	<u>Carbamic acid, phenyl-,1-methylethyl ester</u>	<u>122-42-9</u>	<u>U373</u>
<u>n-Propylamine</u>	<u>1-Propanamine</u>	<u>107-10-8</u>	<u>U194</u>
<u>Propargyl alcohol</u>	<u>2-Propyn-1-ol</u>	<u>107-19-7</u>	<u>P102</u>
<u>Propylene dichloride</u>	<u>Propane, 1,2-dichloro-</u>	<u>78-87-5</u>	<u>U083</u>
<u>1,2-Propylenimine</u>	<u>Aziridine, 2-methyl-</u>	<u>75-55-8</u>	<u>P067</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Propylthiouracil</u>	<u>4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thio-</u>	<u>51-52-5</u>	
<u>Propoxur</u>	<u>Phenol, 2-(1-methylethoxy)-, methylcarbamate</u>	<u>114-26-1</u>	<u>U411</u>
<u>Prosulfocarb</u>	<u>Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester</u>	<u>52888-80-9</u>	<u>U387</u>
<u>Pyridine</u>	<u>Same</u>	<u>110-86-1</u>	<u>U196</u>
<u>Reserpine</u>	<u>Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)-</u>	<u>50-55-5</u>	<u>U200</u>
<u>Resorcinol</u>	<u>1,3-Benzenediol</u>	<u>108-46-3</u>	<u>U201</u>
<u>Safrole</u>	<u>1,3-Benzodioxole, 5-(2-propenyl)-</u>	<u>94-59-7</u>	<u>U203</u>
<u>Selenium</u>	<u>Same</u>	<u>7782-49-2</u>	
<u>Selenium compounds, N.O.S.¹</u>			
<u>Selenium dioxide</u>	<u>Selenious acid</u>	<u>7783-00-8</u>	<u>U204</u>
<u>Selenium sulfide</u>	<u>Selenium sulfide SeS₂</u>	<u>7488-56-4</u>	<u>U205</u>
<u>Selenium, tetrakis (dimethyl-dithiocarbamate)</u>	<u>Carbamodithioic acid, dimethyl-, tetraanhydro-sulfide with orthothioselenious acid</u>	<u>144-34-3</u>	
<u>Selenourea</u>	<u>Same</u>	<u>630-10-4</u>	<u>P103</u>
<u>Silver</u>	<u>Same</u>	<u>7440-22-4</u>	
<u>Silver compounds, N.O.S.¹</u>			
<u>Silver cyanide</u>	<u>Silver cyanide Ag(CN)</u>	<u>506-64-9</u>	<u>P104</u>
<u>Silvex (2,4,5-TP)</u>	<u>Propanoic acid, 2-(2,4,5-trichlorophenoxy)-</u>	<u>93-72-1</u>	<u>See F027</u>
<u>Sodium cyanide</u>	<u>Sodium cyanide Na(CN)</u>	<u>143-33-9</u>	<u>P106</u>
<u>Sodium dibutyldithiocarbamate</u>	<u>Carbamodithioic acid, dibutyl, sodium salt</u>	<u>136-30-1</u>	
<u>Sodium diethyldithiocarbamate</u>	<u>Carbamodithioic acid, diethyl-, sodium salt</u>	<u>148-18-5</u>	
<u>Sodium dimethyldithiocarbamate</u>	<u>Carbamodithioic acid, dimethyl-, sodium salt</u>	<u>128-04-1</u>	
<u>Sodium pentachlorophenate</u>	<u>Pentachlorophenol, sodium salt</u>	<u>131-52-2</u>	
<u>Streptozotocin</u>	<u>D-Glucose, 2-deoxy-2-[(methylnitrosoamino)carbonyl]amino]-</u>	<u>18883-66-4</u>	<u>U206</u>
<u>Strychnine</u>	<u>Strychnidin-10-one</u>	<u>57-24-9</u>	<u>P108</u>
<u>Strychnine salts</u>			<u>P108</u>
<u>Sulfallate</u>	<u>Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester</u>	<u>95-06-7</u>	
<u>TCDD</u>	<u>Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-</u>	<u>1746-01-6</u>	
<u>Tetrabutylthiuram disulfide</u>	<u>Thioperoxydicarbonic diamide, tetrabutyl</u>	<u>1634-02-2</u>	
<u>Tetramethylthiuram monosulfide</u>	<u>Bis (dimethylthiocarbamoyl) sulfide</u>	<u>97-74-5</u>	
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>Benzene, 1,2,4,5-tetrachloro-</u>	<u>95-94-3</u>	<u>U207</u>
<u>Tetrachlorodibenzo-p-dioxins</u>			
<u>Tetrachlorodibenzofurans</u>			
<u>Tetrachloroethane, N.O.S.¹</u>	<u>Ethane, tetrachloro-, N.O.S.</u>	<u>25322-20-7</u>	
<u>1,1,1,2-Tetrachloroethane</u>	<u>Ethane, 1,1,1,2-tetrachloro-</u>	<u>630-20-6</u>	<u>U208</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>Ethane, 1,1,2,2-tetrachloro-</u>	<u>79-34-5</u>	<u>U209</u>
<u>Tetrachloroethylene</u>	<u>Ethene, tetrachloro-</u>	<u>127-18-4</u>	<u>U210</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>Phenol, 2,3,4,6-tetrachloro-</u>	<u>58-90-2</u>	<u>See F027</u>
<u>2,3,4,6-Tetrachlorophenol, potassium salt</u>	<u>Same</u>	<u>53535-27-6</u>	
<u>2,3,4,6-Tetrachlorophenol, sodium salt</u>	<u>Same</u>	<u>25567-55-9</u>	
<u>Tetraethyldithiopyrophosphate</u>	<u>Thiodiphosphoric acid, tetraethyl ester</u>	<u>3689-24-5</u>	<u>P109</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>Tetraethyl lead</u>	<u>Plumbane, tetraethyl-</u>	<u>78-00-2</u>	<u>P110</u>
<u>Tetraethyl pyrophosphate</u>	<u>Diphosphoric acid, tetraethyl ester</u>	<u>107-49-3</u>	<u>P111</u>
<u>Tetranitromethane</u>	<u>Methane, tetranitro-</u>	<u>509-14-8</u>	<u>P112</u>
<u>Thallium</u>	<u>Same</u>	<u>7440-28-0</u>	
<u>Thallium compounds, N.O.S.¹</u>			
<u>Thallic oxide</u>	<u>Thallium oxide Tl_2O_3</u>	<u>1314-32-5</u>	<u>P113</u>
<u>Thallium(I) acetate</u>	<u>Acetic acid, thallium(1+) salt</u>	<u>563-68-8</u>	<u>U214</u>
<u>Thallium(I) carbonate</u>	<u>Carbonic acid, dithallium(1+) salt</u>	<u>6533-73-9</u>	<u>U215</u>
<u>Thallium(I) chloride</u>	<u>Thallium chloride $TlCl$</u>	<u>7791-12-0</u>	<u>U216</u>
<u>Thallium(I) nitrate</u>	<u>Nitric acid, thallium(1+) salt</u>	<u>10102-45-1</u>	<u>U217</u>
<u>Thallium selenite</u>	<u>Selenious acid, dithallium(1+) salt</u>	<u>12039-52-0</u>	<u>P114</u>
<u>Thallium(I) sulfate</u>	<u>Sulfuric acid, dithallium(1+) salt</u>	<u>7446-18-6</u>	<u>P115</u>
<u>Thioacetamide</u>	<u>Ethanethioamide</u>	<u>62-55-5</u>	<u>U218</u>
<u>Thiodicarb</u>	<u>Ethanimidothioic acid, N,N'-[thiobis(methylimino) carbonyloxy]] bis-, dimethyl ester</u>	<u>59669-26-0</u>	<u>U410</u>
<u>Thiofanox</u>	<u>2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-[(methylamino)carbonyl] oxime</u>	<u>39196-18-4</u>	<u>P045</u>
<u>Thiomethanol</u>	<u>Methanethiol</u>	<u>74-93-1</u>	<u>U153</u>
<u>Thiophanate-methyl</u>	<u>Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, dimethyl ester</u>	<u>23564-05-8</u>	<u>U409</u>
<u>Thiophenol</u>	<u>Benzenethiol</u>	<u>108-98-5</u>	<u>P014</u>
<u>Thiosemicarbazide</u>	<u>Hydrazinecarbothioamide</u>	<u>79-19-6</u>	<u>P116</u>
<u>Thiourea</u>	<u>Same</u>	<u>62-56-6</u>	<u>U219</u>
<u>Thiram</u>	<u>Thioperoxydicarbonic diamide [(H_2N)C(S)]₂S₂, tetramethyl-</u>	<u>137-26-8</u>	<u>U244</u>
<u>Tirpate</u>	<u>1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl] oxime,</u>	<u>26419-73-8</u>	<u>P185</u>
<u>Toluene</u>	<u>Benzene, methyl-</u>	<u>108-88-3</u>	<u>U220</u>
<u>Toluenediamine</u>	<u>Benzenediamine, ar-methyl-</u>	<u>25376-45-8</u>	<u>U221</u>
<u>Toluene-2,4-diamine</u>	<u>1,3-Benzenediamine, 4-methyl-</u>	<u>95-80-7</u>	
<u>Toluene-2,6-diamine</u>	<u>1,3-Benzenediamine, 2-methyl-</u>	<u>823-40-5</u>	
<u>Toluene-3,4-diamine</u>	<u>1,2-Benzenediamine, 4-methyl-</u>	<u>496-72-0</u>	
<u>Toluene diisocyanate</u>	<u>Benzene, 1,3-diisocyanatomethyl-</u>	<u>26471-62-5</u>	<u>U223</u>
<u>o-Toluidine</u>	<u>Benzenamine, 2-methyl-</u>	<u>95-53-4</u>	<u>U328</u>
<u>o-Toluidine hydrochloride</u>	<u>Benzenamine, 2-methyl-, hydrochloride</u>	<u>636-21-5</u>	<u>U222</u>
<u>p-Toluidine</u>	<u>Benzenamine, 4-methyl-</u>	<u>106-49-0</u>	<u>U353</u>
<u>Toxaphene</u>	<u>Same</u>	<u>8001-35-2</u>	<u>P123</u>
<u>Triallate</u>	<u>Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester</u>	<u>2303-17-5</u>	<u>U389</u>
<u>1,2,4-Trichlorobenzene</u>	<u>Benzene, 1,2,4-trichloro-</u>	<u>120-82-1</u>	
<u>1,1,2-Trichloroethane</u>	<u>Ethane, 1,1,2-trichloro-</u>	<u>79-00-5</u>	<u>U227</u>
<u>Trichloroethylene</u>	<u>Ethene, trichloro-</u>	<u>79-01-6</u>	<u>U228</u>
<u>Trichloromethanethiol</u>	<u>Methanethiol, trichloro-</u>	<u>75-70-7</u>	<u>P118</u>
<u>Trichloromonofluoromethane</u>	<u>Methane, trichlorofluoro-</u>	<u>75-69-4</u>	<u>U121</u>
<u>2,4,5-Trichlorophenol</u>	<u>Phenol, 2,4,5-trichloro-</u>	<u>95-95-4</u>	<u>See F027</u>
<u>2,4,6-Trichlorophenol</u>	<u>Phenol, 2,4,6-trichloro-</u>	<u>88-06-2</u>	<u>See F027</u>

<u>Common Name</u>	<u>Chemical Abstracts Name</u>	<u>Chemical Abstracts No.</u>	<u>Hazardous Waste No.</u>
<u>2,4,5-T</u>	<u>Acetic acid, (2,4,5-trichlorophenoxy)-</u>	<u>93-76-5</u>	<u>See F027</u>
<u>Trichloropropane, N.O.S.¹</u>		<u>25735-29-9</u>	
<u>1,2,3-Trichloropropane</u>	<u>Propane, 1,2,3-trichloro-</u>	<u>96-18-4</u>	
<u>Triethylamine</u>	<u>Ethanamine, N,N-diethyl-</u>	<u>121-44-8</u>	<u>U404</u>
<u>O,O,O-Triethyl phosphorothioate</u>	<u>Phosphorothioic acid, O,O,O-triethyl ester</u>	<u>126-68-1</u>	
<u>1,3,5-Trinitrobenzene</u>	<u>Benzene, 1,3,5-trinitro-</u>	<u>99-35-4</u>	<u>U234</u>
<u>Tris(1-aziridiny) phosphine sulfide</u>	<u>Aziridine, 1,1',1''-phosphinothioylidynetris-</u>	<u>52-24-4</u>	
<u>Tris(2,3-dibromopropyl) phosphate</u>	<u>1-Propanol, 2,3-dibromo-, phosphate (3:1)</u>	<u>126-72-7</u>	<u>U235</u>
<u>Trypan blue</u>	<u>2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl) bis(azo)]- bis[5-amino-4-hydroxy-, tetrasodium salt.</u>	<u>72-57-1</u>	<u>U236</u>
<u>Uracil mustard</u>	<u>2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-</u>	<u>66-75-1</u>	<u>U237</u>
<u>Vanadium pentoxide</u>	<u>Vanadium oxide V₂O₅</u>	<u>1314-62-1</u>	<u>P120</u>
<u>Vernolate</u>	<u>Carbamothioic acid, dipropyl-, S-propyl ester</u>	<u>1929-77-7</u>	
<u>Vinyl chloride</u>	<u>Ethene, chloro-</u>	<u>75-01-4</u>	<u>U043</u>
<u>Warfarin</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%</u>	<u>81-81-2</u>	<u>U248</u>
<u>Warfarin</u>	<u>2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%</u>	<u>81-81-2</u>	<u>P001</u>
<u>Warfarin salts, when present at concentrations less than 0.3%</u>			<u>U248</u>
<u>Warfarin salts, when present at concentrations greater than 0.3%</u>			<u>P001</u>
<u>Zinc cyanide</u>	<u>Zinc cyanide Zn(CN)₂</u>	<u>557-21-1</u>	<u>P121</u>
<u>Zinc phosphide</u>	<u>Zinc phosphide Zn₃P₂, when present at concentrations greater than 10%</u>	<u>1314-84-7</u>	<u>P122</u>
<u>Zinc phosphide</u>	<u>Zinc phosphide Zn₃P₂, when present at concentrations of 10% or less</u>	<u>1314-84-7</u>	<u>U249</u>
<u>Ziram</u>	<u>Zinc, bis(dimethylcarbamodithioato -S,S')-, (T-4)-</u>	<u>137-30-4</u>	<u>P205</u>

FOOTNOTE: ¹The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

APPENDIX VI

Excluded Under Sections 33.1-24-01-06 and 33.1-24-01-08

Table 1. Wastes Excluded From Nonspecific Sources.

<u>Facility</u>	<u>Address</u>	<u>Waste Description</u>
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[Reserved]

Table 2. Wastes Excluded From Specific Sources.

<u>Facility</u>	<u>Address</u>	<u>Waste Description</u>
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[Reserved]

Table 3. Wastes Excluded From Commercial Chemical Products, Off-Specification Species, Container Residues, and Soil Residues Thereof.

<u>Facility</u>	<u>Address</u>	<u>Waste Description</u>
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[Reserved]

APPENDIX VII

[Reserved]

CHAPTER 33.1-24-03
STANDARDS FOR GENERATORS

Section

<u>33.1-24-03-01</u>	<u>Scope and Applicability</u>
<u>33.1-24-03-02</u>	<u>Hazardous Waste Determination</u>
<u>33.1-24-03-03</u>	<u>Identification Number and Registration Certificate</u>
<u>33.1-24-03-04</u>	<u>General Requirements of the Manifest</u>
<u>33.1-24-03-05</u>	<u>Manifest Tracking Numbers, Manifest Printing, and Obtaining Manifests</u>
<u>33.1-24-03-06</u>	<u>Number of Copies of the Manifest</u>
<u>33.1-24-03-07</u>	<u>Use of the Manifest</u>
<u>33.1-24-03-08</u>	<u>Packaging</u>
<u>33.1-24-03-09</u>	<u>Labeling</u>
<u>33.1-24-03-10</u>	<u>Marking</u>
<u>33.1-24-03-11</u>	<u>Placarding</u>
<u>33.1-24-03-12</u>	<u>Accumulation Time</u>
<u>33.1-24-03-13</u>	<u>Recordkeeping</u>
<u>33.1-24-03-14</u>	<u>Biennial Reporting</u>
<u>33.1-24-03-15</u>	<u>Exception Reporting</u>
<u>33.1-24-03-16</u>	<u>Additional Reporting</u>
<u>33.1-24-03-17</u>	<u>Exports of Hazardous Waste</u>
<u>33.1-24-03-18</u>	<u>Definitions</u>
<u>33.1-24-03-19</u>	<u>General Requirements</u>
<u>33.1-24-03-20</u>	<u>Notification of Intent to Export</u>
<u>33.1-24-03-21</u>	<u>Special Manifest Requirements</u>
<u>33.1-24-03-22</u>	<u>Exception Reports for Exporters</u>
<u>33.1-24-03-23</u>	<u>Biennial Reports for Exporters</u>
<u>33.1-24-03-24</u>	<u>Recordkeeping</u>
<u>33.1-24-03-25</u>	<u>International Agreements</u>
<u>33.1-24-03-26</u>	<u>[Reserved]</u>
<u>33.1-24-03-27</u>	<u>[Reserved]</u>
<u>33.1-24-03-28</u>	<u>[Reserved]</u>
<u>33.1-24-03-29</u>	<u>[Reserved]</u>
<u>33.1-24-03-30</u>	<u>Imports of Hazardous Waste</u>
<u>33.1-24-03-31</u>	<u>[Reserved]</u>
<u>33.1-24-03-32</u>	<u>[Reserved]</u>
<u>33.1-24-03-33</u>	<u>[Reserved]</u>
<u>33.1-24-03-34</u>	<u>[Reserved]</u>
<u>33.1-24-03-35</u>	<u>[Reserved]</u>
<u>33.1-24-03-36</u>	<u>[Reserved]</u>
<u>33.1-24-03-37</u>	<u>[Reserved]</u>
<u>33.1-24-03-38</u>	<u>[Reserved]</u>
<u>33.1-24-03-39</u>	<u>[Reserved]</u>
<u>33.1-24-03-40</u>	<u>Farmers</u>
<u>33.1-24-03-41</u>	<u>[Reserved]</u>
<u>33.1-24-03-42</u>	<u>[Reserved]</u>
<u>33.1-24-03-43</u>	<u>[Reserved]</u>
<u>33.1-24-03-44</u>	<u>[Reserved]</u>
<u>33.1-24-03-45</u>	<u>[Reserved]</u>
<u>33.1-24-03-46</u>	<u>[Reserved]</u>
<u>33.1-24-03-47</u>	<u>[Reserved]</u>
<u>33.1-24-03-48</u>	<u>[Reserved]</u>
<u>33.1-24-03-49</u>	<u>[Reserved]</u>

<u>33.1-24-03-50</u>	<u>Transboundary Movements of Hazardous Waste for Recovery Within the Organization for Economic Cooperation and Development</u>
<u>33.1-24-03-51</u>	<u>Definitions</u>
<u>33.1-24-03-52</u>	<u>General Conditions</u>
<u>33.1-24-03-53</u>	<u>Notification and Consent</u>
<u>33.1-24-03-54</u>	<u>Movement Document</u>
<u>33.1-24-03-55</u>	<u>Contracts</u>
<u>33.1-24-03-56</u>	<u>Provisions Relating to Recognized Traders</u>
<u>33.1-24-03-57</u>	<u>Reporting and Recordkeeping</u>
<u>33.1-24-03-58</u>	<u>[Reserved]</u>
<u>33.1-24-03-59</u>	<u>Organization for Economic Cooperation and Development Waste Lists</u>
<u>33.1-24-03-60</u>	<u>Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities</u>
<u>33.1-24-03-61</u>	<u>Definitions</u>
<u>33.1-24-03-62</u>	<u>Applicability of Sections 33.1-24-03-60 Through 33.1-24-03-77</u>
<u>33.1-24-03-63</u>	<u>Complying With Sections 33.1-24-03-60 Through 33.1-24-03-77 is Optional for Eligible Academic Entities</u>
<u>33.1-24-03-64</u>	<u>Notification by an Eligible Academic Entity Electing to Comply With Sections 33.1-24-03-60 Through 33.1-24-03-77</u>
<u>33.1-24-03-65</u>	<u>Notification by an Eligible Academic Entity Electing to Withdraw From Complying With Sections 33.1-24-03-60 Through 33.1-24-03-77</u>
<u>33.1-24-03-66</u>	<u>Requirements of Sections 33.1-24-03-60 Through 33.1-24-03-77</u>
<u>33.1-24-03-67</u>	<u>Labeling and Management Standards for Containers of Unwanted Material in Laboratories</u>
<u>33.1-24-03-68</u>	<u>Training</u>
<u>33.1-24-03-69</u>	<u>Removing Containers of Unwanted Material From the Laboratory</u>
<u>33.1-24-03-70</u>	<u>Where and When to Make the Hazardous Waste Determination and Where to Send Containers of Unwanted Material Upon Removal From the Laboratory</u>
<u>33.1-24-03-71</u>	<u>Hazardous Waste Determination in the Laboratory Before the Unwanted Material is Removed</u>
<u>33.1-24-03-72</u>	<u>Hazardous Waste Determination at an Onsite Central Accumulation Area</u>
<u>33.1-24-03-73</u>	<u>Hazardous Waste Determination at an Onsite Interim Status or Permitted Treatment, Storage, or Disposal Facility</u>
<u>33.1-24-03-74</u>	<u>Laboratory Clean-outs</u>
<u>33.1-24-03-75</u>	<u>Laboratory Management Plan</u>
<u>33.1-24-03-76</u>	<u>Unwanted Material That is Not Solid Waste or Hazardous Waste</u>
<u>33.1-24-03-77</u>	<u>Nonlaboratory Hazardous Waste Generated at an Eligible Academic Entity</u>
<u>33.1-24-03-78</u>	<u>[Reserved]</u>
<u>33.1-24-03-79</u>	<u>[Reserved]</u>
<u>33.1-24-03-80</u>	<u>[Reserved]</u>
<u>33.1-24-03-81</u>	<u>[Reserved]</u>
<u>33.1-24-03-82</u>	<u>[Reserved]</u>
<u>33.1-24-03-83</u>	<u>[Reserved]</u>
<u>33.1-24-03-84</u>	<u>[Reserved]</u>
<u>33.1-24-03-85</u>	<u>[Reserved]</u>

33.1-24-03-01. Scope and applicability.

This chapter establishes standards for generators of hazardous waste.

1. Subsections 3 and 4 of section 33.1-24-02-05 must be used to determine the applicability of provisions of this chapter that are dependent on calculations of the quantity of hazardous waste generated per month.

2. A generator who treats, stores, or disposes of hazardous waste onsite must only comply with the following sections of this chapter with respect to that waste: Section 33.1-24-03-02 for determining whether or not the generator has a hazardous waste, section 33.1-24-03-03 for obtaining an identification number, section 33.1-24-03-12 for accumulation of hazardous waste, subsections 3 and 4 of section 33.1-24-03-13 for recordkeeping, section 33.1-24-03-16 for additional reporting and if applicable, section 33.1-24-03-40 for farmers.
3. Any person who exports or imports hazardous waste into the United States through this state must comply with the standards applicable to generators established in this chapter.
4. Any person who exports or imports wastes that are considered hazardous under United States national procedures to or from the countries listed in subdivision a of subsection 1 of section 33.1-24-03-25 for recovery must comply with sections 33.1-24-03-50 through 33.1-24-03-59. A waste is considered hazardous under United States national procedures if the waste meets the federal definition of hazardous waste in 40 CFR 261.3 and is subject to manifesting requirements at sections 33.1-24-03-04 through 33.1-24-03-07, the universal waste management standards of sections 33.1-24-05-700 through 33.1-24-05-799 or the export requirements in the spent lead-acid battery management standards of sections 33.1-24-05-235 through 33.1-24-05-249.
5. A farmer who generates waste pesticides which are hazardous waste and who complies with all the requirements of section 33.1-24-03-40 is not required to comply with other standards in chapters 33.1-24-03, 33.1-24-05, and 33.1-24-06 with respect to such pesticides.
6. A person who generates a hazardous waste as defined in chapter 33.1-24-02 is subject to the compliance requirements and penalties prescribed in North Dakota Century Code chapter 23.1-04 if the person does not comply with the requirements of this chapter.
7. An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this chapter.
8. Persons responding to an explosives or munitions emergency in accordance with subparagraph d of paragraph 1 of subdivision g of subsection 6 of section 33.1-24-05-01 or paragraph 4 of subdivision g of subsection 6 of section 33.1-24-05-01 or 40 CFR 265.1(c)(11)(i)(D) or (iv) as incorporated by reference at subsection 5 of section 33.1-24-06-16, and item 4 of subparagraph a and subparagraph c of paragraph 9 of subdivision b of subsection 2 of section 33.1-24-06-01, are not required to comply with the standards of chapter 33.1-24-03.
9. The laboratories owned by an eligible academic entity that chooses to be subject to the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 are not subject to (for purposes of this subsection, the terms "laboratory" and "eligible academic entity" shall have the meaning as defined in section 33.1-24-03-61):
 - a. The requirements of section 33.1-24-03-02 or subsection 3 of section 33.1-24-03-12, for large quantity generators and small quantity generators, except as provided in sections 33.1-24-03-60 through 33.1-24-03-77; and
 - b. The conditions of subsection 2 of section 33.1-24-02-05, for conditionally exempt small quantity generators, except as provided in sections 33.1-24-03-60 through 33.1-24-03-77.

Note 1: The provisions of section 33.1-24-03-12 are applicable to the onsite accumulation of hazardous waste by generators. Therefore, the provisions of section 33.1-24-03-12 only apply to owners or operators who are shipping hazardous waste that they generated at that facility.

Note 2: A generator who treats, stores, or disposes of hazardous waste onsite must comply with the applicable standards and permit requirements set forth in chapters 33.1-24-05 and 33.1-24-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-02. Hazardous waste determination.

A person who generates a solid waste as defined in section 33.1-24-02-02 must determine if that waste is a hazardous waste using the following method:

1. The person should first determine if the waste is excluded from regulation under section 33.1-24-02-04;
2. The person must then determine if the waste is listed as a hazardous waste in chapter 33.1-24-02; and
3. For purposes of compliance with sections 33.1-24-05-250 through 33.1-24-05-299, or if the waste is not listed in sections 33.1-24-02-15 through 33.1-24-02-18, the generator must then determine whether the waste is identified in sections 33.1-24-02-10 through 33.1-24-02-14 by either:
 - a. Testing the waste according to the methods set forth in chapter 33.1-24-02 or an equivalent method as approved by the department; or
 - b. Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.
 - c. All waste analysis pursuant to subdivision a must be conducted by a laboratory approved by the department's certification procedures.
4. If the waste is determined to be hazardous, the generator must refer to chapter 33.1-24-02 and sections 33.1-24-05-01 through 33.1-24-05-559, sections 33.1-24-05-700 through 33.1-24-05-1149, and subsection 5 of section 33.1-24-06-16 for possible exclusions or restrictions pertaining to management of the generator's specific waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-03. Identification number and registration certificate.

1. A generator may not treat, store, dispose of, transport, or offer for transportation hazardous waste without having received an identification number and a registration certificate from the department.
2. A generator who has not received an identification number and a registration certificate may obtain one by applying to the department. Upon receiving the request the department will assign an identification number and issue a registration certificate to the generator.
3. A generator may not offer the generator's hazardous waste to transporters that have not received an identification number and a transporter permit, or to treatment, storage, or disposal facilities that have not received an identification number and applied for a hazardous waste permit.

4. The department may assess and collect reasonable fees for the issuance of registration certificates.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-09; S.L. 2017, ch. 199, § 19

33.1-24-03-04. General requirements of the manifest.

1. A generator who transports, or offers for transport a hazardous waste for offsite treatment, storage, or disposal, or a treatment, storage, and disposal facility who offers for transport a rejected hazardous waste load, must prepare a manifest on environmental protection agency form 8700-22, and if necessary, environmental protection agency form 8700-22A, according to instructions included in appendix I to this chapter.
 - a. The revised manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-03-04, 33.1-24-03-05, subsection 6 of section 33.1-24-03-07, sections 33.1-24-03-10, 33.1-24-03-12, 33.1-24-03-21, 33.1-24-03-30, and appendix I to this chapter, shall not apply until September 5, 2006, or article 33.1-24 is amended and effective, but not prior to September 5, 2006. The manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-03-04, 33.1-24-03-05, 33.1-24-03-10, 33.1-24-03-12, 33.1-24-03-21, 33.1-24-03-30, and appendix I to this chapter contained in article 33.1-24, amended December 1, 2003, shall be applicable until September 5, 2006, or when amended, but not prior to September 5, 2006.
 - b. Electronic manifest. In lieu of using the manifest form specified in subsection 1, a person required to prepare a manifest under subsection 1 may prepare and use an electronic manifest, provided that the person:
 - (1) Complies with the requirements in subsection 8 of section 33.1-24-03-07 for use of electronic manifests; and
 - (2) Complies with the requirements of 40 CFR 3.10 for the reporting of electronic documents to the environmental protection agency.
2. A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.
3. A generator may also designate on the manifest one alternate facility which is permitted to handle the generator's waste in the event an emergency prevents delivery of the waste to the primary designated facility.
4. If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must either designate another facility or instruct the transporter to return the waste.
5. The requirements of sections 33.1-24-03-04 through 33.1-24-03-07 do not apply to hazardous waste produced by generators of greater than one hundred kilograms but less than one thousand kilograms in a calendar month where:
 - a. The waste is reclaimed under a contractual agreement pursuant to which:
 - (1) The type of waste and frequency of shipments are specified in the agreement; and

(2) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and

b. The generator maintains a copy of the reclamation agreement in the generator's files for a period of at least three years after termination or expiration of the agreement.

6. The requirements of sections 33.1-24-03-04 through 33.1-24-03-07 and subsection 2 of section 33.1-24-03-10 do not apply to the transport of hazardous wastes on a public or private right of way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right of way. Notwithstanding subsection 1 of section 33.1-24-04-01, the generator or transporter must comply with the requirements for transporters set forth in sections 33.1-24-04-07 and 33.1-24-04-08 in the event of a discharge of hazardous waste on a public or private right of way.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-05. Manifest tracking numbers, manifest printing, and obtaining manifests.

1. A registrant:

a. May not print, or have printed, the manifest for use of distribution unless it has received approval from the environmental protection agency director of the office of resource conservation and recovery to do so under subsections 3 and 5.

b. The approved registrant is responsible for ensuring that the organizations identified in its application are in compliance with the procedures of its approved application and the requirements of this section. The registrant is responsible for assigning manifest tracking numbers to the registrant's manifests.

2. A registrant must submit an initial application to the environmental protection agency director of the office of resource conservation and recovery that contains the following information:

a. Name and mailing address of registrant;

b. Name, telephone number, and email address of contact person;

c. Brief description of registrant's government or business activity;

d. Environmental protection agency identification number of the registrant, if applicable;

e. Description of the scope of the operations that the registrant plans to undertake in printing, distributing, and using its manifests, including:

(1) A description of the printing operation. The description should include an explanation of whether the registrant intends to print the registrant's manifests in-house (for example, using the registrant's own printing establishments) or through a separate (for example, unaffiliated) printing company. If the registrant intends to use a separate printing company to print the manifest on the registrant's behalf, the application must identify this printing company and discuss how the registrant will oversee the company. If this includes the use of intermediaries (for example, prime and subcontractor relationships), the role of each must be discussed. The application must provide the name and mailing address of each company. It also must provide the name and telephone number of the contact person at each company.

(2) A description of how the registrant will ensure that the registrant's organization and unaffiliated companies, if any, comply with the requirements of this section. The application must discuss how the registrant will ensure that a unique manifest tracking number will be preprinted on each manifest. The application must describe the internal control procedures to be followed by the registrant and unaffiliated companies to ensure that numbers are tightly controlled and remain unique. In particular, the application must describe how the registrant will assign manifest tracking numbers to its manifests. If computer systems or other infrastructure will be used to maintain, track, or assign numbers, these should be indicated. The application must also indicate how the printer will preprint a unique number on each form (for example, crash or press numbering). The application also must explain the other quality procedures to be followed by each establishment and printing company to ensure that all required print specifications are consistently achieved and that printing violations are identified and corrected at the earliest practicable time.

(3) An indication of whether the registrant intends to use the manifests for the registrant's own business operations or to distribute the manifests to a separate company or to the general public (for example, for purchase).

f. A brief description of the qualifications of the company that will print the manifest. The registrant may use readily available information to do so (for example, corporate brochures, product samples, customer references, documentation of international organization for standardization certification), so long as such information pertains to the establishments or company being proposed to print the manifest.

g. Proposed unique three letter manifest tracking number suffix. If the registrant is approved to print the manifest, the registrant must use this suffix to preprint a unique manifest tracking number on each manifest.

h. A signed certification by a duly authorized employee of the registrant that the organizations and companies in the registrant's application will comply with the procedures of its approved application and the requirements of this section and that the registrant will notify the environmental protection agency director of the office of resource conservation and recovery of any duplicated manifest tracking numbers on manifests that have been used or distributed to other parties as soon as this becomes known.

3. The environmental protection agency will review the application submitted under subsection 2 and either approve the application or request additional information or modification before approving the application.

4. The environmental protection agency upon approval of the application under subsection 3:

a. Will provide the registrant an electronic file of the manifest, continuation sheet, and manifest instructions and ask the registrant to submit three fully assembled manifests and continuation sheet samples, except as noted in subdivision c of this subsection. The registrant's samples must meet all of the specifications in subsection 6 and be printed by the company that will print the manifest as identified in the application approved under subsection 3.

b. The registrant must submit a description of the manifest samples as follows:

(1) Paper type (for example, manufacturer and grade of the manifest paper);

(2) Paper weight of each copy;

(3) Ink color of the manifest's instructions. If screening of the ink was used, the registrant must indicate the extent of the screening; and

(4) Method of binding the copies.

c. The registrant need not submit samples of the continuation sheet if the registrant will print the registrant's continuation sheet using the same paper type, paper weight of each copy, ink color of the instructions, and binding method as its manifest form samples.

5. The environmental protection agency will evaluate the forms and either approve the registrant to print the forms as proposed or request additional information or modification to the forms before approval. The environmental protection agency will notify the registrant of the environmental protection agency's decision by mail. The registrant cannot use or distribute the registrant's forms until the environmental protection agency approves the forms. An approved registrant must print the manifest and continuation sheet according to the registrant's application approved under subsection 3 and the manifest specifications in subsection 6. The registrant also must print the forms according to the paper type, paper weight, ink color of the manifest instructions and binding method of the registrant's approved forms.

6. Paper manifests and continuation sheets must be printed according to the following specifications:

a. The manifest and continuation sheet must be printed with the exact format and appearance as environmental protection agency forms 8700-22 and 8700-22a, respectively. However, information required to complete the manifest may be preprinted on the manifest form.

b. A unique manifest tracking number assigned in accordance with a numbering system approved by environmental protection agency must be preprinted in item 4 of the manifest. The tracking number must consist of a unique three letter suffix following nine digits.

c. The manifest and continuation sheet must be printed on eight and one half by eleven inch white paper, excluding common stubs (for example, top or side bound stubs). The paper must be durable enough to withstand normal use.

d. The manifest and continuation sheet must be printed in black ink that can be legibly photocopied, scanned, and faxed, except that the marginal words indicating copy distribution must be printed with a distinct ink color or with another method (for example, white text against black background, in text box, or, black text against gray background in text box) that clearly distinguishes the copy distribution notations from the other text and data entries on the form.

e. The manifest and continuation sheet must be printed as six copy forms. Copy to copy registration must be exact within one thirty-second of an inch. Handwritten and typed impressions on the form must be legible on all six copies. Copies must be bound together by one or more common stubs that reasonably ensure that they will not become detached inadvertently during normal use.

f. Each copy of the manifest and continuation sheet must indicate how the copy must be distributed, as follows:

(1) Page 1 (top copy): "designated facility to destination state (if required)".

(2) Page 2: "designated facility to generator state (if required)".

(3) Page 3: "designated facility to generator".

(4) Page 4: "designated facility's copy".

(5) Page 5: "transporters' copy".

(6) Page 6 (bottom copy): "generator's initial copy".

g. The instructions in the appendix to 40 CFR regulations part 262 must appear legibly on the back of the copies of the manifest and continuation sheet as provided in subsection 6. The instructions must not be visible through the front of the copies when photocopied or faxed.

(1) Manifest form 8700-22.

(a) The "instructions for generators" on copy 6;

(b) The "instructions for international shipment block" and "instructions for transporters" on copy 5; and

(c) The "instructions for treatment, storage, and disposal facilities" on copy 4.

(2) Manifest form 8700-22a.

(a) The "instructions for generators" on copy 6;

(b) The "instructions for transporters" on copy 5; and

(c) The "instructions for treatment, storage, and disposal facilities" on copy 4.

7. A generator:

a. May use manifests printed by any source so long as the source of the printed form has received approval from the environmental protection agency to print the manifest under subsections 3 and 5. A registered source may be a:

(1) State agency;

(2) Commercial printer;

(3) Hazardous waste generator, transporter or treatment, storage, or disposal facility; or

(4) Hazardous waste broker or other preparer who prepares or arranges shipments of hazardous waste for transportation.

b. Must determine whether the generator state or the consignment state for a shipment regulates any additional wastes (beyond those regulated federally) as hazardous wastes under these states' authorized programs. Generators also must determine whether the consignment state or generator state requires the generator to submit any copies of the manifest to these states. In cases where the generator must supply copies to either the generator's state or the consignment state, the generator is responsible for supplying legible photocopies of the manifest to these states.

8. Registrant requests.

a. If an approved registrant would like to update any of the information provided in its application approved under subsection 3 (for example, to update a company phone number or name of contact person), the registrant must revise the application and submit it to the environmental protection agency director of the office of resource conservation and recovery, along with an indication or explanation of the update, as soon as practicable

after the change occurs. The agency either will approve or deny the revision. If the agency denies the revision, the agency will explain the reasons for the denial, and the agency will contact the registrant and request further modification before approval.

b. If the registrant would like a new tracking number suffix, the registrant must submit a proposed suffix to the environmental protection agency director of the office of resource conservation and recovery, along with the reason for requesting a new tracking number suffix. The agency will either approve the suffix or deny the suffix and provide an explanation why the proposed suffix is not acceptable.

c. If a registrant would like to change the paper type, paper weight, ink color of the manifest instructions, or binding method of the registrant's manifest or continuation sheet subsequent to approval under subsection 5, then the registrant must submit three samples of the revised form for the environmental protection agency review and approval. If the approved registrant would like to use a new printer, the registrant must submit three manifest samples printed by the new printer, along with a brief description of the printer's qualifications to print the manifest. The environmental protection agency will evaluate the manifests and either approve the registrant to print the forms as proposed or request additional information or modification to the manifests before approval. The environmental protection agency will notify the registrant of the agency's decision by mail. The registrant cannot use or distribute the registrant's revised forms until the environmental protection agency approves the forms.

9. If, subsequent to the registrant's approval under subsection 5, a registrant typesets the registrant's manifest or continuation sheet instead of using the electronic file of the forms provided by the environmental protection agency, the registrant must submit three samples of the manifest or continuation sheet to the registry for approval. The environmental protection agency will evaluate the manifest or continuation sheet and either approve the registrant to print the manifest or continuation sheet as proposed or request additional information or modification to the manifest or continuation sheet before approval. The environmental protection agency will notify the registrant of the agency's decision by mail. The registrant cannot use or distribute its typeset forms until the environmental protection agency approves the forms.

10. The environmental protection agency may exempt a registrant from the requirement to submit form samples under subsection 4 or subdivision c of subsection 8 if the agency is persuaded that a separate review of the registrant's forms would serve little purpose in informing an approval decision (for example, a registrant certifies that it will print the manifest using the same paper type, paper weight, ink color of the instructions and binding method of the form samples approved for some other registrant). A registrant may request an exemption from the environmental protection agency by indicating why an exemption is warranted.

11. An approved registrant must notify the environmental protection agency by phone or email as soon as it becomes aware that it has duplicated tracking numbers on any manifests that have been used or distributed to other parties.

12. If, subsequent to approval of a registrant under subsection 5, the environmental protection agency becomes aware that the approved paper type, paper weight, ink color of the instructions, or binding method of the registrant's form is unsatisfactory, the environmental protection agency will contact the registrant and require modifications to the form.

13. The environmental protection agency:

a. May suspend and, if necessary, revoke printing privileges if the agency find that the registrant:

(1) Has used or distributed forms that deviate from the registrant's approved form samples in regard to paper weight, paper type, ink color of the instructions, or binding method; or

(2) Exhibits a continuing pattern of behavior in using or distributing manifests that contain duplicate manifest tracking numbers.

b. Will send a warning letter to the registrant that specifies the date by which the registrant must come into compliance with the requirements. If the registrant does not come in compliance by the specified date, the environmental protection agency will send a second letter notifying the registrant that the environmental protection agency has suspended or revoked the registrant's printing privileges. An approved registrant must provide information on the registrant's printing activities to the environmental protection agency if requested.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-06. Number of copies of the manifest.

The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-07. Use of the manifest.

1. The generator must:

a. Sign the manifest certification by hand;

b. Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and

c. Retain one copy, in accordance with subsection 1 of section 33.1-24-03-13.

2. The generator must give the transporter the remaining copies of the manifest.

3. For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

4. For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this section to:

a. The next nonrail transporter, if any;

b. The designated facility if transported solely by rail; or

c. The last rail transporter to handle the waste in the United States if exported by rail.

5. For shipments of hazardous waste to a designated facility in an authorized state which has not yet obtained authorization to regulate that particular waste as hazardous, the generator must assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.

6. Waste minimization certification. A generator who initiates a shipment of hazardous waste must certify to one of the following statements in item 15 of the uniform hazardous waste manifest:

a. "I am a large quantity generator. I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;"
or

b. "I am a small quantity generator. I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford."

7. For rejected shipments of hazardous waste or container residues contained in nonempty containers that are returned to the generator by the designated facility (following the procedures of subsection 6 of section 33.1-24-05-39), the generator must:

a. Sign either:

(1) Item 20 of the new manifest if a new manifest is used for the returned shipment; or

(2) Item 18c of the original manifest if the original manifest is used for the returned shipment.

b. Provide the transporter a copy of the manifest;

c. Within thirty days of delivery of the rejected shipment or container residues contained in nonempty containers, send a copy of the manifest to the designated facility that returned the shipment to the generator; and

d. Retain at the generator's site a copy of each manifest for at least three years from the date of delivery.

8. Use of the electronic manifest. Electronic manifests are equivalent to paper manifests.

a. Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with subdivision b of subsection 1 of section 33.1-24-03-04, and used in accordance with this subsection in lieu of environmental protection agency forms 8700-22 and 8700-22a are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these rules to obtain, complete, sign, provide, use, or retain a manifest.

(1) Any requirement in these rules to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of 40 CFR 262.25.

(2) Any requirement in these rules to give, provide, send, forward, or return to another person a copy of the manifest is satisfied when an electronic manifest is transmitted to the other person by submission to the system.

(3) Any requirement in these rules for a generator to keep or retain a copy of each manifest is satisfied by retention of a signed electronic manifest in the generator's account on the national e-manifest system, provided that such copies are readily available for viewing and production if requested by any environmental protection agency or authorized department representative.

(4) No generator may be held liable for the inability to produce an electronic manifest for inspection under this subsection if the generator can demonstrate that the inability to produce the electronic manifest is due exclusively to a technical difficulty with the electronic manifest system for which the generator bears no responsibility.

b. A generator may participate in the electronic manifest system either by accessing the electronic manifest system from the generator's own electronic equipment, or by accessing the electronic manifest system from portable equipment brought to the generator's site by the transporter who accepts the hazardous waste shipment from the generator for offsite transportation.

c. Restriction on use of electronic manifests. A generator may prepare an electronic manifest for the tracking of hazardous waste shipments involving any hazardous waste only if it is known at the time the manifest is originated that all waste handlers named on the manifest participate in the electronic manifest system.

d. Requirement for one printed copy. To the extent the hazardous materials regulation on shipping papers for carriage by public highway requires shippers of hazardous materials to supply a paper document for compliance with 49 CFR 177.817, a generator originating an electronic manifest must also provide the initial transporter with one printed copy of the electronic manifest.

e. Special procedures when electronic manifest is unavailable. If a generator has prepared an electronic manifest for a hazardous waste shipment, but the electronic manifest system becomes unavailable for any reason prior to the time that the initial transporter has signed electronically to acknowledge the receipt of the hazardous waste from the generator, then the generator must obtain and complete a paper manifest and if necessary, a continuation sheet in accordance with the manifest instructions in appendix I to this chapter, and use these paper forms from this point forward in accordance with the requirements of subsections 1 through 5 and 7.

f. Special procedures for electronic signature methods undergoing tests. If a generator has prepared an electronic manifest for a hazardous waste shipment, and signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the generator shall also sign with an ink signature the generator or offeror certification on the printed copy of the manifest provided under subdivision d.

g. Imposition of user fee. A generator who is a user of the electronic manifest may be assessed a user fee by the environmental protection agency for the origination of each electronic manifest. The environmental protection agency shall maintain and update from time-to-time the schedule of electronic manifest user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The schedule of electronic manifest user fees shall be published by the environmental protection agency as an appendix to 40 CFR Part 262.

9. Electronic manifest signatures. Electronic signature methods for the e-manifest system shall:

- a. Be a legally valid and enforceable signature under applicable environmental protection agency and other federal requirements pertaining to electronic signatures; and
- b. Be a method that is designed and implemented in a manner that the environmental protection agency considers to be as cost-effective and practical as possible for users of the manifest.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-08. Packaging.

Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must package the waste in accordance with the applicable department of transportation regulations on packaging under 49 CFR parts 173, 178, and 179.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-09. Labeling.

Before transporting or offering hazardous waste for transportation offsite, a generator must label each package in accordance with the applicable department of transportation regulations on hazardous materials under 49 CFR part 172.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-10. Marking.

1. Before transporting or offering hazardous waste for transportation offsite, a generator must mark each package of hazardous waste in accordance with the applicable department of transportation regulations on hazardous materials under 49 CFR part 172.
2. Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must mark each container of one hundred nineteen gallons or less used in such transportation with the following words and information in accordance with the requirements of 49 CFR part 172.304:

HAZARDOUS WASTE - Federal Law prohibits improper disposal. If found, contact the nearest police or public safety authority or the United States Environmental Protection Agency.

Generator's Name and Address _____.

Generator's Identification Number _____.

Manifest Tracking Number _____.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-11. Placarding.

Before transporting hazardous waste or offering hazardous waste for transportation offsite, a generator must placard or offer the initial transporter the appropriate placards according to department of transportation regulations for hazardous materials under 49 CFR part 172, subpart F.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-12. Accumulation time.

1. Except as provided in subsections 4, 5, and 6, a generator may accumulate hazardous waste onsite for ninety days or less without a permit or without having interim status provided that:

a. The waste is placed:

(1) In containers and the generator complies with the applicable requirements of sections 33.1-24-05-89 through 33.1-24-05-102 and sections 33.1-24-05-400 through 33.1-24-05-474;

(2) In tanks and the generator complies with the applicable requirements of sections 33.1-24-05-103 through 33.1-24-05-115 and sections 33.1-24-05-400 through 33.1-24-05-474, except subsection 3 of section 33.1-24-05-110 and section 33.1-24-05-113;

(3) On drip pads and the generator complies with sections 33.1-24-05-501 through 33.1-24-05-524 and maintains the following records at the facility:

(a) A description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every ninety days; and

(b) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; or

(4) In containment buildings and the generator complies with sections 33.1-24-05-475 through 33.1-24-05-500 and has placed its professional engineer certification that the building complies with the design standards specified in section 33.1-24-05-476 in the facility's operating record no later than sixty days after the date of initial operation of the unit. After February 18, 1993, professional engineer certification will be required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(a) A written description of procedures to ensure that each waste volume remains in the unit for no more than ninety days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the ninety-day limit, and documentation that the procedures are complied with; or

(b) Documentation that the unit is emptied at least once every ninety days.

In addition, such a generator is exempt from all the requirements in sections 33.1-24-05-59 through 33.1-24-05-88, except for sections 33.1-24-05-60 and 33.1-24-05-63;

b. The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

c. While being accumulated onsite, each container and tank is properly labeled or marked with the words "Hazardous Waste"; and

d. The generator complies with the requirements for owners or operators in sections 33.1-24-05-15 through 33.1-24-05-36, with section 33.1-24-05-07, and with all applicable requirements under sections 33.1-24-05-250 through 33.1-24-05-299.

2. A generator of one thousand kilograms or greater of hazardous waste in a calendar month, or greater than one kilogram of acute hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 in a calendar month, who accumulates hazardous waste or acute hazardous waste for more than ninety days is an operator of a storage facility and is subject to the requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, 33.1-24-05-950 through 33.1-24-05-1149, subsection 5 of section 33.1-24-06-16 and the permit requirements of chapter 33.1-24-06 unless the generator has been granted an extension to the ninety-day period. Such extension may be granted by the department if hazardous wastes must remain onsite for longer than ninety days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the department on a case-by-case basis.

3. A generator may accumulate as much as fifty-five gallons of hazardous waste or one quart of acutely hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with subsections 1 or 4 provided the operator:

a. Complies with sections 33.1-24-05-90, 33.1-24-05-91, and subsection 1 of section 33.1-24-05-92; and

b. Marks the operator's containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

c. A generator who accumulates either hazardous waste or acutely hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 in excess of the amounts listed in subsection 3 at or near any point of generation must, with respect to that amount of excess waste, comply within three days with subsection 1 or other applicable provisions of this section. During the three-day period, the generator must continue to comply with subdivisions a and b. The generator must mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

4. A generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month may accumulate hazardous waste onsite for one hundred eighty days or less without a permit or without having interim status provided that:

a. The quantity of waste accumulated onsite never exceeds six thousand kilograms;

b. The generator complies with requirements of sections 33.1-24-05-89 through 33.1-24-05-102, except sections 33.1-24-05-95 and 33.1-24-05-98;

c. The generator complies with the requirements of section 33.1-24-05-114;

d. The generator complies with the requirements of subdivisions b and c of subsection 1, sections 33.1-24-05-12 through 33.1-24-05-21, with all applicable requirements of sections 33.1-24-05-250 through 33.1-24-05-299; and

e. The generator complies with the following requirements:

(1) At all times there must be at least one employee either on the premises or on call (for example, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all the emergency response measures specified in paragraph 4. This employee is the emergency coordinator.

(2) The generator shall post the following information next to the telephone:

(a) The name and telephone number of the emergency coordinator;

(b) Location of fire extinguishers and spill control material and, if present, fire alarm; and

(c) The telephone number of the fire department, unless the facility has a direct alarm.

(3) The generator shall ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies;

(4) An emergency coordinator or the emergency coordinator's designee shall respond to any emergency that arises. The applicable responses are as follows:

(a) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

(b) In the event of a spill, contain the flow of hazardous waste to the extent possible, and as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil; and

(c) In the event of a fire, explosion, or other release which could threaten human health outside the facility, or when the generator has knowledge that a spill has reached surface water, the generator shall immediately notify the national response center using their twenty-four-hour toll-free number 1-800-424-8802. The report must include the following information:

[1] The name, address, and identification number of the generator;

[2] Date, time, and type of incident (for example, spill or fire);

[3] Quantity and type of hazardous waste involved in the incident;

[4] Extent of injuries, if any; and

[5] Estimated quantity and disposition of recovered materials, if any.

5. A generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month and who must transport the waste, or offer the waste for transportation, over a distance of two hundred miles or more for offsite treatment, storage, or disposal may accumulate hazardous waste onsite for two hundred seventy days or less without a permit or without having interim status provided the generator complies with the requirements of subsection 4.

6. A generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding six thousand kilograms or accumulates hazardous waste for more than one hundred eighty days (or for more than two hundred seventy days if the generator shall transport the waste or offer the waste for transportation, over a distance of two hundred miles [321.87 kilometers] or more) is an operator of a storage facility and is subject to the requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, 33.1-24-05-950 through 33.1-24-05-1149, subsection 5 of section 33.1-24-06-16 and the permit requirements of chapter 33.1-24-06 unless the generator has been granted an extension to one hundred eighty days (or two hundred seventy days if applicable). Such extension may be granted by the department if hazardous waste must remain onsite for longer than one hundred eighty days (or two hundred seventy days if applicable) due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days may be granted at the discretion of the department on a case-by-case basis.

7. A generator who generates one thousand kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the hazardous waste code F006, may accumulate F006 waste onsite for more than ninety days, but not more than one hundred eighty days without a permit or without having interim status provided that:

a. The generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants, or contaminants entering F006 or otherwise released to the environment prior to its recycling;

b. The F006 waste is legitimately recycled through metals recovery;

c. No more than twenty thousand kilograms of F006 waste is accumulated onsite at any one time; and

d. The F006 waste is managed in accordance with the following:

(1) The F006 waste is placed:

(a) In containers and the generator complies with the applicable requirements of sections 33.1-24-05-89 through 33.1-24-05-102 and sections 33.1-24-05-400 through 33.1-24-05-474;

(b) In tanks and the generator complies with the applicable requirements of sections 33.1-24-05-103 through 33.1-24-05-117 and sections 33.1-24-05-400 through 33.1-24-05-474, except for subsection 3 of section 33.1-24-05-110 and section 33.1-24-05-113;

(c) In containment buildings and the generator complies with sections 33.1-24-05-475 through 33.1-24-05-500, and has placed its professional engineer certification that the building complies with the design standards specified in section 33.1-24-05-476 in the facility's operating record prior to operation of the unit. The owner or operator must maintain the following records at the facility:

[1] A written description of procedures to ensure that the F006 waste remains in the unit for no more than one hundred eighty days, a written description of the waste generation and management practices for the facility showing that they are consistent with the one-hundred-eighty-day limit, and documentation that the generator is complying with the procedures; or

[2] Documentation that the unit is emptied at least once every one hundred eighty days.

(d) Or any combination of subparagraphs a, b, and c, as applicable;

(2) In addition, such a generator is exempt from all the requirements in sections 33.1-24-05-59 through 33.1-24-05-88, except for sections 33.1-24-05-60 and 33.1-24-05-63;

(3) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container;

(4) While being accumulated onsite, each container and tank is labeled or marked clearly with the words, "Hazardous Waste"; and

(5) The generator complies with the requirements for owners or operators in sections 33.1-24-05-15 through 33.1-24-05-36, with section 33.1-24-05-07, and with subdivision e of subsection 1 of section 33.1-24-05-256.

8. A generator who generates one thousand kilograms or greater of hazardous waste per calendar month who also generates wastewater treatment sludges from electroplating operations that meet the listing description for the hazardous waste code F006, and who must transport this waste, or offer this waste for transportation, over a distance of two hundred miles [321.87 kilometers] or more for offsite metals recovery, may accumulate F006 waste onsite for more than ninety days, but not more than two hundred seventy days without a permit or without having interim status if the generator complies with the requirements of subdivisions a through d of subsection 7.

9. A generator accumulating F006 waste in accordance with subsections 7 and 8 who accumulates F006 waste onsite for more than one hundred eighty days (or for more than two hundred seventy days if the generator must transport this waste, or offer this waste for transportation, over a distance of two hundred miles [321.87 kilometers] or more), or who accumulates more than twenty thousand kilograms of F006 waste onsite is an operator of a storage facility and is subject to the requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, 33.1-24-05-950 through 33.1-24-05-1149, subsection 5 of section 33.1-24-06-16, and the permit requirements of chapter 33.1-24-06 unless the generator has been granted an extension to the one hundred eighty day (or two hundred seventy day if applicable) period or an exception to the twenty thousand kilogram accumulation limit. Such extensions and exceptions may be granted by the department if F006 waste must remain onsite for longer than one hundred eighty days (or two hundred seventy days if applicable) or if more than twenty thousand kilograms of F006 waste must remain onsite due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to thirty days or an exception to the accumulation limit may be granted at the discretion of the department on a case-by-case basis.

10. A generator who sends a shipment of hazardous waste to a designated facility with the understanding that the designated facility can accept and manage the waste and later receives that shipment back as a rejected load or residue in accordance with the manifest discrepancy provisions of section 33.1-24-05-39 may accumulate the returned waste onsite in accordance with subsections 1 and 2 or 4, 5 and 6, depending on the amount of hazardous waste onsite in that calendar month. Upon receipt of the returned shipment, the generator must:

a. Sign item 18c of the manifest, if the transporter returned the shipment using the original manifest; or

- b. Sign item 20 of the manifest, if the transporter returned the shipment using a new manifest.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-13. Recordkeeping.

1. A generator must keep a copy of each manifest signed in accordance with subsection 1 of section 33.1-24-03-07 for three years or until the generator receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
2. A generator must keep a copy of each biennial report and exception report for a period of at least three years from the due date of the report.
3. A generator must keep records of any test results, waste analyses, or other determinations made in accordance with section 33.1-24-03-02 for at least three years from the date the waste was last sent to onsite or offsite treatment, storage, or disposal.
4. The periods for retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-14. Biennial reporting.

1. A generator who ships any hazardous waste offsite to a treatment, storage, or disposal facility within the United States shall prepare and submit a single copy of a biennial report to the department by March first of each even-numbered year. The biennial report must be submitted on department-approved forms, must cover generator activities during the previous calendar year, and must include the following information:
 - a. The identification number, name, and address of the generator;
 - b. The calendar year covered by the report;
 - c. The identification number, name, and address for each offsite treatment, storage, or disposal facility in the United States to which waste was shipped during the year;
 - d. The name and identification number of each transporter used during the reporting year for shipments to a treatment, storage, or disposal facility within the United States;
 - e. A description, hazardous waste number (from chapter 33.1-24-02), department of transportation hazard class, and quantity of each hazardous waste shipped offsite for shipments to a treatment, storage, or disposal facility within the United States. This information must be listed by identification number of each such offsite facility to which waste was shipped;
 - f. A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated;

g. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to the previous year to the extent such information is available for years prior to 1984; and

h. The certification signed by the generator or authorized representative.

2. Any generator who treats, stores, or disposes of hazardous waste onsite must submit a biennial report covering those wastes in accordance with the provisions of chapters 33.1-24-05 and 33.1-24-06.

3. Reporting for exports of hazardous waste is not required on the biennial report form. A separate annual report requirement is set forth in section 33.1-24-03-23.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-15. Exception reporting.

1. A generator of one thousand kilograms or greater of hazardous waste in a calendar month, or greater than one kilogram of acute hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 in a calendar month, who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within thirty-five days of the date the waste was accepted by the initial transporter shall contact the transporter or the owner or operator, or both, of the designated facility to determine the status of the hazardous waste.

2. A generator of one thousand kilograms or greater of hazardous waste in a calendar month, or greater than one kilogram of acute hazardous waste listed in section 33.1-24-02-16 or subsection 5 of section 33.1-24-02-18 in a calendar month, must submit an exception report to the department if the generator has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within forty-five days of the date the waste was accepted by the initial transporter. The exception report must be submitted to the department within sixty days of the date the waste was accepted by the initial transporter and must include:

a. A legible copy of the manifest for which the generator does not have confirmation of delivery; and

b. A cover letter signed by the generator or the generator's authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

3. A generator of greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within sixty days of the date the waste was accepted by the initial transporter shall submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the department.

4. For rejected shipments of hazardous waste or container residues contained in nonempty containers that are forwarded to an alternate facility by a designated facility using a new manifest (following the procedures of paragraphs a through f of subsection 5 of section 33.1-24-05-39), the generator must comply with the requirements of subsections 1 through 3, as applicable, for the shipment forwarding the material from the designated facility to the alternate facility instead of for the shipment from the generator to the designated facility. For purposes of

subsections 1 through 3 for a shipment forwarding such waste to an alternate facility by a designated facility:

- a. The copy of the manifest received by the generator must have the handwritten signature of the owner or operator of the alternate facility in place of the signature of the owner or operator of the designated facility; and
- b. The thirty-five, forty-five, or sixty-day time frames begin the date the waste was accepted by the initial transporter forwarding the hazardous waste shipment from the designated facility to the alternate facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-16. Additional reporting.

1. A generator of greater than one thousand kilograms of hazardous waste in a calendar month who makes an offsite shipment of hazardous waste shall send to the department a legible copy of the signed manifest or shipping paper within twenty-one days of the date:
 - a. When first signed by the generator and transporter; and
 - b. As signed by and received from the designated facility or alternate facility.
2. The department, as it deems necessary, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in this article.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-17. Exports of hazardous waste.

Sections 33.1-24-03-17 through 33.1-24-03-25 establish requirements applicable to exports of hazardous waste. Except to the extent section 33.1-24-03-25 provides otherwise, a primary exporter of hazardous waste must comply with the special requirements of sections 33.1-24-03-17 through 33.1-24-03-25 and a transporter transporting hazardous waste for export shall comply with applicable requirements of chapter 33.1-24-04. Section 33.1-24-03-25 sets forth the requirements of international agreements between the United States and receiving countries which establish different notice, export, and enforcement procedures for the transportation, treatment, storage, and disposal of hazardous waste for shipments between the United States and those countries.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-18. Definitions.

In addition to the definitions set forth in section 33.1-24-01-04, the following definitions apply to sections 33.1-24-03-17 through 33.1-24-03-25:

1. "Consignee" means the ultimate treatment, storage, or disposal facility in a receiving country to which the hazardous waste will be sent.
2. "Environmental protection agency acknowledgment of consent" means the cable sent to the environmental protection agency from the United States embassy in a receiving country that

acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

3. "Primary exporter" means any person who is required to originate the manifest for a shipment of a hazardous waste in accordance with chapter 33.1-24-03, which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.
4. "Receiving country" means a foreign country to which a hazardous waste is sent for the purpose of treatment, storage, or disposal (except short-term storage incidental to transportation).
5. "Transit country" means any foreign country, other than a receiving country, through which a hazardous waste is transported.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-19. General requirements.

Exports of hazardous wastes are prohibited except in compliance with the applicable requirements of sections 33.1-24-03-17 through 33.1-24-03-25 and chapter 33.1-24-04. Exports of hazardous waste are prohibited unless:

1. Notification in accordance with section 33.1-24-03-20 has been provided;
2. The receiving country has consented to accept the hazardous waste;
3. A copy of the environmental protection agency acknowledgment of consent to the shipment accompanies the hazardous waste shipment and, unless exported by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)); and
4. The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the environmental protection agency acknowledgment of consent.

History: Effective December 1, 1988.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-20. Notification of intent to export.

1. A primary exporter of hazardous waste shall notify the department and the environmental protection agency of an intended export before such waste is scheduled to leave the United States. A complete notification should be submitted sixty days before the initial shipment is intended to be shipped offsite. This notification may cover export activities extending over a twelve-month or lesser period. The notification must be in writing, signed by the primary exporter, and include the following information:

a. Name, mailing address, telephone number, and identification number of the primary exporter; and

b. By consignee, for each hazardous waste type:

- (1) A description of the hazardous waste and hazardous waste number (from chapter 33.1-24-02), United States department of transportation proper shipping name,

hazard class, and identification number (UN/NA) for each hazardous waste as identified in 49 CFR part 171-177;

- (2) The estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;
- (3) The estimated total quantity of the hazardous waste in units as specified in the instructions to the uniform hazardous waste manifest form (8700-22);
- (4) All points of entry to and departure from each foreign country through which the hazardous waste will pass;
- (5) A description of the means by which each shipment of the hazardous waste will be transported (for example, mode of transportation vehicle (air, highway, rail, water, etc.)), types of container (drums, boxes, tanks, etc.);
- (6) A description of the manner in which the hazardous waste will be treated, stored, or disposed of in the receiving country (for example, land or ocean incineration, other land disposal, ocean dumping, recycling);
- (7) The name and site address of the consignee and any alternate consignee; and
- (8) The name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there.

2. Notifications sent by mail must be sent to the department and to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, Environmental Protection Agency, Ariel Rios Building, Room 6144, 12th Street and Pennsylvania Avenue NW., Washington, D.C. 20004. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export".

3. Except for changes to the telephone number in subdivision a of subsection 1, changes to paragraph 5 of subdivision b of subsection 1, and decreases in the quantity indicated pursuant to paragraph 3 of subdivision b of subsection 1 when the conditions specified on the original notification change (including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification), the primary exporter shall provide the department and the environmental protection agency with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes (except for changes to paragraph 8 of subdivision b of subsection 1 and in the ports of entry to and departure from transit countries pursuant to paragraph 4 of subdivision b of subsection 1) has been obtained and the primary exporter receives an environmental protection agency acknowledgment of consent reflecting the receiving country's consent to the changes.

4. Upon request by the department or the environmental protection agency, a primary exporter shall furnish to the department or the environmental protection agency any additional information which a receiving country requests in order to respond to a notification.

5. A notification is complete when the department receives a notification which the department determines satisfies the requirements of subsection 1 and the requirements of the

environmental protection agency such that an environmental protection agency acknowledgment of consent is issued to the primary exporter.

6. The primary exporter shall provide the department with a copy of the environmental protection agency acknowledgment of consent prior to shipment offsite.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-21. Special manifest requirements.

A primary exporter shall comply with the manifest requirements of sections 33.1-24-03-04 through 33.1-24-03-07 except that:

1. In lieu of the name, site address, and identification number of the designated permitted facility, the primary exporter shall enter the name and site address of the consignee;
2. In lieu of the name, site address, and identification number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee;
3. In the International Shipments block, the primary exporter must check the export box and enter the point of exit (city and state) from the United States;
4. The following statement must be added to the end of the first sentence of the certification set forth in item 16 of the uniform hazardous waste manifest form: "and conforms to the terms of the attached environmental protection agency acknowledgment of consent";
5. The primary exporter may obtain the manifest from any source that is registered with the United States environmental protection agency as a supplier of manifests (for example, states, waste handlers, or commercial forms printers);
6. The primary exporter shall require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies (as defined in subsection 1 of section 33.1-24-05-39) between the manifest and the shipment. A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste;
7. In lieu of the requirements of subsection 4 of section 33.1-24-03-04, where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter shall:
 - a. Renotify the state and the environmental protection agency of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with subsection 3 of section 33.1-24-03-20 and obtain an environmental protection agency acknowledgment of consent prior to delivery; or
 - b. Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and
 - c. Instruct the transporter to revise the manifest in accordance with the primary exporter's instructions.
8. The primary exporter shall attach a copy of the environmental protection agency acknowledgment of consent to the shipment to the manifest which must accompany the hazardous waste shipment. For exports by rail or water (bulk shipments), the primary exporter shall provide the transporter with an environmental protection agency acknowledgment of consent which must accompany the hazardous waste but which need not be attached to the

manifest except that for exports by water (bulk shipments) the primary exporter shall attach the copy of the environmental protection agency acknowledgment of consent to the shipping paper; and

9. The primary exporter shall provide the transporter with an additional copy of the manifest for delivery to the United States customs official at the point the hazardous waste leaves the United States in accordance with subdivision d of subsection 7 of section 33.1-24-04-4.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-22. Exception reports for exporters.

In lieu of the requirements of section 33.1-24-03-15, a primary exporter shall file an exception report with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460 and the department if any of the following occurs:

1. The primary exporter has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within forty-five days from the date it was accepted by the initial transporter; or
2. Within ninety days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received; or
3. The waste is returned to the United States.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-23. Annual reports for exporters.

1. Primary exporters of hazardous waste shall file with the environmental protection agency administrator and the department no later than March first of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous calendar year. Such reports must include the following:
 - a. The identification number, name, mailing, and site address of the exporter;
 - b. The calendar year covered by the report;
 - c. The name and site address of each consignee;
 - d. By consignee, for each hazardous waste exported, a description of the hazardous waste, the hazardous waste number (from chapter 33.1-24-02), department of transportation hazard class, the name and identification number (where applicable) for each transporter used, the total amount of waste shipped, and number of shipments pursuant to each notification;
 - e. Except for hazardous waste produced by exporters of greater than one hundred kilograms but less than one thousand kilograms in a calendar month, unless provided pursuant to section 33.1-24-03-14, in even-numbered years:

(1) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

(2) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.

f. A certification signed by the primary exporter which states: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

2. Annual reports submitted by mail must be sent to the department and to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460. Hand-delivered reports should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, Environmental Protection Agency, Ariel Rios Building, Room 6144, 12th Street and Pennsylvania Avenue NW, Washington, D.C. 20004.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-24. Recordkeeping.

1. For all exports a primary exporter shall:

a. Keep a copy of each notification of intent to export for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

b. Keep a copy of each environmental protection agency acknowledgment of consent for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;

c. Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three years from the date the hazardous waste was accepted by the initial transporter; and

d. Keep a copy of each annual report for a period of at least three years from the due date of the report.

2. The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department or the administrator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-25. International agreements.

1. Any person who exports or imports wastes that are considered hazardous under United States national procedures to or from designated member countries of the Organization for Economic

Cooperation and Development as defined in subdivision a for purposes of recovery is subject to sections 33.1-24-03-50 through 33.1-24-03-59. The requirements of sections 33.1-24-03-17 through 33.1-24-03-25 and section 33.1-24-03-30 do not apply to such exports and imports. A waste is considered hazardous under United States national procedures if the waste meets the federal definition of hazardous waste in 40 CFR 261.3 and is subject to manifesting requirements at sections 33.1-24-03-04 through 33.1-24-03-07, the universal waste management standards of sections 33.1-24-05-700 through 33.1-24-05-799 or the export requirements in the spent lead-acid battery management standards of sections 33.1-24-05-235 through 33.1-24-05-249.

a. For the purposes of sections 33.1-24-03-50 through 33.1-24-03-59, the designated Organization for Economic Cooperation and Development member countries consist of Australia, Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, the Republic of Korea, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

b. For the purposes of sections 33.1-24-03-50 through 33.1-24-03-59, Canada and Mexico are considered Organization for Economic Cooperation and Development member countries only for the purposes of transit.

2. Any person who exports hazardous waste to or imports hazardous waste from: A designated Organization for Economic Cooperation and Development member country for purposes other than recovery (for example, incineration, disposal), Mexico (for any purpose), or Canada (for any purpose) remains subject to the requirements of sections 33.1-24-03-17 through 33.1-24-03-25 and section 33.1-24-03-30, and is not subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-26. [Reserved]

33.1-24-03-27. [Reserved]

33.1-24-03-28. [Reserved]

33.1-24-03-29. [Reserved]

33.1-24-03-30. Imports of hazardous waste.

1. Any person who imports hazardous waste from a foreign country into the United States shall comply with the requirements of this chapter and the special requirements of this section.

2. When importing a hazardous waste, a person shall meet all the requirements of section 33.1-24-03-04 for the manifest except that:

a. In place of the generator's name, address, and identification number, the name and address of the foreign generator and the importer's name, address, and identification number must be used.

b. In place of the generator's signature on the certification statement, the United States importer or the importer's agent shall sign and date the certification and obtain the signature of the initial transporter.

3. A person who imports hazardous waste may obtain the manifest form from any source that is registered with the United States environmental protection agency as a supplier of manifests (for example, states, waste handlers, or commercial forms printers).
4. In the International Shipments block, the importer must check the import box and enter the point of entry (city and state) into the United States.
5. The importer must provide the transporter with additional copies of the manifest to be submitted by the receiving facility to the environmental protection agency and the department in accordance with subdivision c of subsection 1 of section 33.1-24-05-38 and the applicable requirements of subsection 5 of section 33.1-24-06-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-31. [Reserved]

33.1-24-03-32. [Reserved]

33.1-24-03-33. [Reserved]

33.1-24-03-34. [Reserved]

33.1-24-03-35. [Reserved]

33.1-24-03-36. [Reserved]

33.1-24-03-37. [Reserved]

33.1-24-03-38. [Reserved]

33.1-24-03-39. [Reserved]

33.1-24-03-40. Farmers.

A farmer disposing of waste pesticides from the farmer's own use which are hazardous wastes is not required to comply with the standards in this chapter or chapters 33.1-24-05 and 33.1-24-06 for those wastes provided the farmer triple rinses each emptied pesticide container in accordance with subdivision a, b, or c of subsection 5 of section 33.1-24-02-07 and disposes of the pesticide residues on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-41. [Reserved].

33.1-24-03-42. [Reserved].

33.1-24-03-43. [Reserved].

33.1-24-03-44. [Reserved].

33.1-24-03-45. [Reserved].

33.1-24-03-46. [Reserved].

33.1-24-03-47. [Reserved].

33.1-24-03-48. [Reserved].

33.1-24-03-49. [Reserved].

33.1-24-03-50. Transboundary movements of hazardous waste for recovery within the Organization for Economic Cooperation and Development.

Sections 33.1-24-03-50 through 33.1-24-03-59 establish requirements applicable to transboundary movements of hazardous waste for recovery within the Organization for Economic Cooperation and Development.

1. The requirements of sections 33.1-24-03-50 through 33.1-24-03-59 apply to imports and exports of wastes that are considered hazardous under United States national procedures and are destined for recovery operations in the countries listed in subdivision a of subsection 1 of section 33.1-24-03-25. A waste is considered hazardous under United States national procedures if the waste:
 - a. Meets the federal definition of a hazardous waste in 40 CFR 261.3; and
 - b. Is subject to the manifesting requirements at sections 33.1-24-03-04 through 33.1-24-03-07, the universal waste management standards of sections 33.1-24-05-700 through 33.1-24-05-799 or the export requirements in the spent lead-acid battery management standards of sections 33.1-24-05-235 through 33.1-24-05-249.
2. Any person (exporter, importer, or recovery facility operator) who mixes two or more wastes (including hazardous and nonhazardous wastes) or otherwise subjects two or more wastes (including hazardous and nonhazardous wastes) to physical or chemical transformation operations, and thereby creates a new hazardous waste, becomes a generator and assumes all subsequent generator duties under chapter 33.1-24-03 and any exporter duties, if applicable, under sections 33.1-24-03-50 through 33.1-24-03-59.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-51. Definitions.

In addition to the definitions set forth in section 33.1-24-01-04, the following definitions apply to sections 33.1-24-03-50 through 33.1-24-03-59:

1. "Competent authority" means the regulatory authority or authorities of concerned countries having jurisdiction over transboundary movements of wastes destined for recovery operations.
2. "Countries concerned" means the Organization for Economic Cooperation and Development member countries of export or import and any Organization for Economic Cooperation and Development member countries of transit.
3. "Country of export" means any designated Organization for Economic Cooperation and Development member country listed in subdivision a of subsection 1 of section 33.1-24-03-25 from which a transboundary movement of hazardous wastes is planned to be initiated or is initiated.
4. "Country of import" means any designated Organization for Economic Cooperation and Development member country listed in subdivision a of subsection 1 of section 33.1-24-03-25

to which a transboundary movement of hazardous wastes is planned or takes place for the purpose of submitting the wastes to recovery operations therein.

5. "Country of transit" means any designated Organization for Economic Cooperation and Development member country listed in subdivisions a and b of subsection 1 of section 33.1-24-03-25 other than the country of export or country of import across which a transboundary movement of hazardous wastes is planned or takes place.

6. "Exporter" means the person under the jurisdiction of the country of export who has, or will have at the time the planned transboundary movement commences, possession or other forms of legal control of the wastes and who proposes transboundary movement of the hazardous wastes for the ultimate purpose of submitting them to recovery operations. When the United States is the country of export, exporter is interpreted to mean a person domiciled in the United States.

7. "Importer" means the person to whom possession or other form of legal control of the waste is assigned at the time the waste is received in the country of import.

8. "Organization for Economic Cooperation and Development area" means all land or marine areas under the national jurisdiction of any Organization for Economic Cooperation and Development member country listed in section 33.1-24-03-25. When the regulations refer to shipments to or from an Organization for Economic Cooperation and Development member country, this means Organization for Economic Cooperation and Development area.

9. "OECD" means the Organization for Economic Cooperation and Development.

10. "Recognized trader" means a person who, with appropriate authorization of countries concerned, acts in the role of principal to purchase and subsequently sell wastes; this person has legal control of such wastes from time of purchase to time of sale; such a person may act to arrange and facilitate transboundary movements of wastes destined for recovery operations.

11. "Recovery facility" means a facility which, under applicable domestic law, is operating or is authorized to operate in the country of import to receive wastes and to perform recovery operations on them.

12. "Recovery operations" means activities leading to resource recovery, recycling, reclamation, direct reuse or alternative uses, which include:

a. R1 - Use as a fuel (other than in direct incineration) or other means to generate energy.

b. R2 - Solvent reclamation/regeneration.

c. R3 - Recycling/reclamation of organic substances which are not used as solvents.

d. R4 - Recycling/reclamation of metals and metal compounds.

e. R5 - Recycling/reclamation of other inorganic materials.

f. R6 - Regeneration of acids or bases.

g. R7 - Recovery of components used for pollution abatement.

h. R8 - Recovery of components used from catalysts.

i. R9 - Used oil rerefining or other reuses of previously used oil.

j. R10 - Land treatment resulting in benefit to agriculture or ecological improvement.

- k. R11 - Uses of residual materials obtained from any of the operations numbered R1 through R10.
- l. R12 - Exchange of wastes for submission to any of the operations numbered R1 through R11.
- m. R13 - Accumulation of material intended for any operation numbered R1 through R12.

13. "Transboundary movement" means any movement of wastes from an area under the national jurisdiction of one Organization for Economic Cooperation and Development member country to an area under the national jurisdiction of another Organization for Economic Cooperation member country.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-52. General conditions.

1. The level of control for exports and imports of waste is indicated by assignment of the waste to either a list of wastes subject to the Green control procedures or a list of wastes subject to the Amber control procedures and by the national procedures of the United States, as defined in subsection 1 of section 33.1-24-03-50. The Organization for Economic Cooperation and Development Green and Amber lists are incorporated by reference in subsection 4 of section 33.1-24-03-59.

a. Listed wastes subject to the Green control procedures.

(1) Green wastes that are not considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50 are subject to existing controls normally applied to commercial transactions.

(2) Green wastes that are considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50 are subject to the Amber control procedures set forth in sections 33.1-24-03-50 through 33.1-24-03-59.

b. Listed wastes subject to the Amber control procedures.

(1) Amber wastes that are considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50 are subject to the Amber control procedures set forth in sections 33.1-24-03-50 through 33.1-24-03-59.

(2) Amber wastes that are considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50, are subject to the Amber control procedures in the United States, even if they are imported to or exported from a designated member country listed in subdivision a of subsection 1 of section 33.1-24-03-25 that does not consider the waste to be hazardous. In such an event, the responsibilities of the Amber control procedures shift as provided.

(a) For United States exports, the United States shall issue an acknowledgment of receipt and assume other responsibilities of the competent authority of the country of import.

(b) For United States imports, the United States recovery facility or importer, or both, and the United States shall assume the obligations associated with the Amber

control procedures that normally apply to the exporter and country of export, respectively.

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- (3) Amber wastes that are not considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50, but are considered hazardous by an Organization for Economic Cooperation and Development member country are subject to the Amber control procedures in the Organization for Economic Cooperation and Development member country that considers the waste hazardous. All responsibilities of the United States importer or exporter, or both, shift to the importer or exporter, or both, of the Organization for Economic Cooperation and Development member country that considers the waste hazardous unless the parties make other arrangements through contracts.

[Note to subdivision b: Some wastes subject to the Amber control procedures are not listed or otherwise identified as hazardous under the Resource Conservation and Recovery Act, and therefore are not subject to the Amber control procedures of sections 33.1-24-03-50 through 33.1-24-03-59. Regardless of the status of the waste under the Resource Conservation and Recovery Act, however, other federal environmental statutes (for example, the Toxic Substances Control Act) restrict certain waste imports or exports. Such restrictions continue to apply with regard to sections 33.1-24-03-50 through 33.1-24-03-59.]

c. Procedures for mixtures of wastes.

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- (1) A Green waste that is mixed with one or more other Green wastes such that the resulting mixture is not considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50 shall be subject to the Green control procedures, provided the composition of this mixture does not impair its environmentally sound recovery.

[Note to paragraph 1: The regulated community should note that some Organization for Economic Cooperation and Development member countries may require, by domestic law, that mixtures of different Green wastes be subject to the Amber control procedures.]

-
- (2) A Green waste that is mixed with one or more Amber wastes, in any amount, de minimis or otherwise, or a mixture of two or more Amber wastes, such that the resulting waste mixture is considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50 are subject to the Amber control procedures, provided the composition of this mixture does not impair its environmentally sound recovery.

[Note to paragraph 2: The regulated community should note that some Organization for Economic Cooperation and Development member countries may require, by domestic law, that a mixture of a Green waste and more than a de minimis amount of an Amber waste or a mixture of two or more Amber wastes be subject to the Amber control procedures.]

d. Wastes not yet assigned to an Organization for Economic Cooperation and Development waste list are eligible for transboundary movements, as follows:

-
- (1) If such wastes are considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50, such wastes are subject to the Amber control procedures.

(2) If such wastes are not considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50, such wastes are subject to the Green control procedures.

2. General conditions applicable to transboundary movements of hazardous waste:

a. The waste must be destined for recovery operations at a facility that, under applicable domestic law, is operating or is authorized to operate in the importing country;

b. The transboundary movement must be in compliance with applicable international transport agreements; and

[Note to subdivision b: These international agreements include, but are not limited to, the Chicago Convention (1944), ADR (1957), ADN (1970), MARPOL Convention (1973/1978), SILAS Convention (1974), IMDG Code (1985), COTIF (1985), and RID (1985).]

c. Any transit of waste through a non-Organization for Economic Cooperation and Development member country must be conducted in compliance with all applicable international and national laws and regulations.

3. Provisions relating to re-export for recovery to a third country:

a. Re-export of wastes subject to the Amber control procedures from the United States, as the country of import, to a third country listed in subdivision a of subsection 1 of section 33.1-24-03-25 may occur only after an exporter in the United States provides notification to and obtains consent from the competent authorities in the third country, the original country of export, and any transit countries. The notification must comply with the notice and consent procedures in section 33.1-24-03-53 for all countries concerned and the original country of export. The competent authorities of the original country of export, as well as the competent authorities of all other countries concerned have thirty days to object to the proposed movement.

(1) The thirty-day period begins once the competent authorities of both the initial country of export and new country of import issue Acknowledgments of Receipt of the notification.

(2) The transboundary movement may commence if no objection has been lodged after the thirty-day period has passed or immediately after written consent is received from all relevant Organization for Economic Cooperation and Development importing and transit countries.

b. In the case of re-export of Amber wastes to a country other than those listed in subdivision a of subsection 1 of section 33.1-24-03-25, notification to and consent of the competent authorities of the Organization for Economic Cooperation and Development member country of export and any Organization for Economic Cooperation and Development member countries of transit is required as specified in subdivision a, in addition to compliance with all international agreements and arrangements to which the first importing Organization for Economic Cooperation and Development member country is a party and all applicable regulatory requirements for exports from the first country of import.

4. Duty to return or re-export wastes subject to the Amber control procedures. When a transboundary movement of wastes subject to the Amber control procedures cannot be completed in accordance with the terms of the contract or the consents and alternative arrangements cannot be made to recover the wastes in an environmentally sound manner in

the country of import, the waste must be returned to the country of export or re-exported to a third country. The provisions of subsection 3 apply to any shipments to be re-exported to a third country. The following provisions apply to shipments to be returned to the country of export as appropriate:

- a. Return from the United States to the country of export: The United States importer must inform the environmental protection agency at the specified address in paragraph 1 of subdivision a of subsection 2 of section 33.1-24-03-53 and the state of the need to return the shipment. The environmental protection agency will then inform the competent authorities of the countries of export and transit, citing the reasons for returning the wastes. The United States importer must complete the return within ninety days from the time the environmental protection agency informs the country of export of the need to return the waste, unless informed in writing by the environmental protection agency of another time frame agreed to by the concerned member countries. If the return shipment will cross any transit country, the return shipment may only occur after the environmental protection agency provides notification to and obtains consent from the competent authority of the country of transit, and provides a copy of that consent to the United States importer.
- b. Return from the country of import to the United States: The United States exporter must provide for the return of the hazardous waste shipment within ninety days from the time the country of import informs the environmental protection agency of the need to return the waste or such other period of time as the concerned member countries agree. The United States exporter must submit an exception report to the environmental protection agency and the state in accordance with subsection 2 of section 33.1-24-03-57.

5. Duty to return wastes subject to the Amber control procedures from a country of transit.

When a transboundary movement of wastes subject to the Amber control procedures does not comply with the requirements of the notification and movement documents or otherwise constitutes illegal shipment, and if alternative arrangements cannot be made to recover these wastes in an environmentally sound manner, the waste must be returned to the country of export. The following provisions apply as appropriate:

- a. Return from the United States (as country of transit) to the country of export. The United States transporter must inform the environmental protection agency at the specified address in paragraph 1 of subdivision a of subsection 2 of section 33.1-24-03-53 and the state of the need to return the shipment. The environmental protection agency will then inform the competent authority of the country of export, citing the reasons for returning the waste. The United States transporter must complete the return within ninety days from the time the environmental protection agency informs the country of export of the need to return the waste, unless informed in writing by the environmental protection agency of another time frame agreed to by the concerned member countries.
- b. Return from the country of transit to the United States (as country of export): The United States exporter must provide for the return of the hazardous waste shipment within ninety days from the time the competent authority of the country of transit informs the environmental protection agency of the need to return the waste or such other period of time as the concerned member countries agree. The United States exporter must submit an exception report to the environmental protection agency and the state in accordance with subsection 2 of section 33.1-24-03-57.

6. Requirements for wastes destined for and received by R12 and R13 facilities. The transboundary movement of wastes destined for R12 and R13 operations must comply with all Amber control procedures for notification and consent as set forth in section 33.1-24-03-53 and

for the movement document as set forth in section 33.1-24-03-54. Additional responsibilities of R12 or R13, or both, facilities include:

- a. Indicating in the notification document the foreseen recovery facility or facilities where the subsequent R1 through R11 recovery operation takes place or may take place.
- b. Within three days of the receipt of the wastes by the R12 or R13, or both, recovery facility or facilities, the facilities shall return a signed copy of the movement document to the exporter and to the competent authorities of the countries of export and import. The facilities shall retain the original of the movement document for three years.
- c. As soon as possible, but no later than thirty days after the completion of the R12 or R13, or both, recovery operation and no later than one calendar year following the receipt of the waste, the R12 or R13 facilities shall send a certificate of recovery to the foreign exporter and to the competent authority of the country of export and to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, and to the state, by email, email without digital signature followed by mail, or fax followed by mail.
- d. When an R12 or R13, or both, recovery facility delivers wastes for recovery to an R1 through R11 recovery facility located in the country of import, it shall obtain as soon as possible, but no later than one calendar year following delivery of the waste, a certification from the R1 through R11 facility that recovery of the wastes at that facility has been completed. The R12 or R13, or both, facility must promptly transmit the applicable certification to the competent authorities of the countries of import and export, identifying the transboundary movements to which the certification pertain.
- e. When an R12 or R13, or both, recovery facility delivers wastes for recovery to an R1 through R11 recovery facility located:
 - (1) In the initial country of export, Amber control procedures apply including a new notification;
 - (2) In a third country other than the initial country of export, Amber control procedures apply, with the additional provision that the competent authority of the initial country of export shall also be notified of the transboundary movement.

7. **Laboratory analysis exemption.** The transboundary movement of an Amber waste is exempt from the Amber control procedures if it is in certain quantities and destined for laboratory analysis to assess its physical or chemical characteristics, or to determine its suitability for recovery operations. The quantity of such waste shall be determined by the minimum quantity reasonably needed to perform the analysis in each particular case adequately but in no case exceed twenty-five kilograms. Waste destined for laboratory analysis must still be appropriately packaged and labeled.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-53. Notification and consent.

1. **Applicability.** Consent must be obtained from the competent authorities of the relevant Organization for Economic Cooperation and Development countries of import and transit prior to exporting hazardous waste destined for recovery operations subject to sections 33.1-

24-03-50 through 33.1-24-03-59. Hazardous wastes subject to the Amber control procedures are subject to the requirements of subsection 2; and wastes not identified on any list are subject to the requirements of subsection 3.

2. **Amber wastes.** Exports of hazardous wastes from the United States as described in subsection 1 of section 33.1-24-03-50 that are subject to the Amber control procedures are prohibited unless the notification and consent requirements of subdivision a or b of subsection 2 are met.

a. Transactions requiring specific consent:

(1) **Notification.** At least forty-five days prior to commencement of each transboundary movement, the exporter must provide written notification in English of the proposed transboundary movement to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, and the state, with the words "Attention: Organization for Economic Cooperation and Development Export Notification" prominently displayed on the envelope. This notification must include all of the information identified in subsection 4. In cases where wastes having similar physical and chemical characteristics, the same United Nations classification, the same hazardous waste codes, and are to be sent periodically to the same recovery facility by the same exporter, the exporter may submit one general notification of intent to export these wastes in multiple shipments during a period of up to one year. Even when a general notification is used for multiple shipments, each shipment still must be accompanied by its own movement document pursuant to section 33.1-24-03-54.

(2) **Tacit consent.** If no objection has been lodged by any countries concerned (for example, exporting, importing, or transit) to a notification provided pursuant to paragraph 1 within thirty days after the date of issuance of the acknowledgment of receipt of notification by the competent authority of the country of import, the transboundary movement may commence. Tacit consent expires one calendar year after the close of the thirty-day period; renotification and renewal of all consents are required for exports after that date.

(3) **Written consent.** If the competent authorities of all the relevant Organization for Economic Cooperation and Development importing and transit countries provide written consent in a period less than thirty days, the transboundary movement may commence immediately after all necessary consents are received. Written consent expires for each relevant Organization for Economic Cooperation and Development importing and transit country one calendar year after that date of that country's consent unless otherwise specified; renotification and renewal of each expired consent is required for exports after that date.

b. Transboundary movements to facilities preapproved by the competent authorities of the importing countries to accept specific wastes for recovery:

(1) **Notification.** The exporter must provide the environmental protection agency, and the state, a notification that contains all the information identified in subsection 4 in English, at least ten days in advance of commencing shipment to a preapproved facility. The notification must indicate that the recovery facility is preapproved, and may apply to a single specific shipment or to multiple shipments as described in paragraph 1 of subdivision a. This information must be sent to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, and the state, with the words

"Organization for Economic Cooperation and Development Export Notification - Preapproved Facility" prominently displayed on the envelope. General notifications that cover multiple shipments as described in paragraph 1 of subdivision a may cover a period of up to three years. Even when a general notification is used for multiple shipments, each shipment still must be accompanied by its own movement document pursuant to section 33.1-24-03-54.

(2) Exports to preapproved facilities may take place after the elapse of seven working days from the issuance of an acknowledgment of receipt of the notification by the competent authority of the country of import unless the exporter has received information indicating that the competent authority of any countries concerned objects to the shipment.

3. Wastes not covered in the Organization for Economic Cooperation and Development Green and Amber lists. Wastes destined for recovery operations, that have not been assigned to the Organization for Economic Cooperation and Development Green and Amber lists, incorporated by reference in subsection 4 of section 33.1-24-03-59, but which are considered hazardous under United States national procedures as defined in subsection 1 of section 33.1-24-03-50, are subject to the notification and consent requirements established for the Amber control procedures in accordance with subsection 2. Wastes destined for recovery operations, that have not been assigned to the Organization for Economic Cooperation and Development Green and Amber lists incorporated by reference in subsection 4 of section 33.1-24-03-59, and are not considered hazardous under United States national procedures as defined by subsection 1 of section 33.1-24-03-50 are subject to the Green control procedures.

4. Notifications submitted under this section must include the following information:

- a. Serial number or other accepted identifier of the notification document;
- b. Exporter name and identification number (if applicable), address, telephone, fax numbers, and email address;
- c. Importing recovery facility name, address, telephone, fax number, email address, and technologies employed;
- d. Importer name (if not the owner or operator of the recovery facility), address, telephone, fax numbers, and email address; whether the importer will engage in waste exchange recovery operation R12 or waste accumulation recovery operation R13 prior to delivering the waste to the final recovery facility and identification of recovery operations to be employed at the final recovery facility;
- e. Intended transporters or their agents, or both, address, telephone, fax, and email address;
- f. Country of export and relevant competent authority, and point of departure;
- g. Countries of transit and relevant competent authorities and points of entry and departure;
- h. Country of import and relevant competent authority, and point of entry;
- i. Statement of whether the notification is a single notification or a general notification. If general, include period of validity requested;
- j. Dates foreseen for commencement of transboundary movements;
- k. Means of transport envisaged;

- l. Designation of waste types from the appropriate Organization for Economic Cooperation and Development list incorporated by reference in subsection 4 of section 33.1-24-03-59, descriptions of each waste type, estimated total quantity of each, hazardous waste code, and the United Nations number for each waste type;
- m. Specification of the recovery operations as defined in section 33.1-24-03-51.
- n. Certification signed by the exporter that states:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, and that any applicable insurance or other financial guarantees are or shall be in force covering the transboundary movement.

Name: _____

Signature: _____

Date: _____

[Note to subdivision n: The United States does not currently require financial assurance for these waste shipments. However, United States exporters may be asked by other governments to provide and certify to such assurance as a condition of obtaining consent to a proposed movement.]

- 5. **Certificate of Recovery.** As soon as possible, but no later than thirty days after the completion of recovery and no later than one calendar year following receipt of the waste, the United States recovery facility shall send a certificate of recovery to the exporter and to the competent authorities of the countries of export and import by mail, email without a digital signature followed by mail, or fax followed by mail. The certificate of recovery shall include a signed, written and dated statement that affirms that the waste materials were recovered in the manner agreed to by the parties to the contract required under section 33.1-24-03-55.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-54. Movement document.

- 1. All United States parties subject to the contract provisions of section 33.1-24-03-55 must ensure that a movement document meeting the conditions of subsection 2 of this section accompanies each transboundary movement of wastes subject to the Amber control procedures from the initiation of the shipment until it reaches the final recovery facility, including cases in which the waste is stored or sorted, or both, by the importer prior to shipment to the final recovery facility, except as provided in subdivisions a and b of subsection 1.
 - a. For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must forward the movement document with the manifest to the last water (bulk shipment) transporter to handle the waste in the United States if exported by water (in accordance with the manifest routing procedures at subsection 3 of section 33.1-24-03-07).
 - b. For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must forward the movement document with the manifest (in accordance with the routing procedures for the manifest in subsection 4 of section 33.1-

24-03-07) to the next nonrail transporter, if any, or the last rail transporter to handle the waste in the United States if exported by rail.

2. The movement document must include all information required under section 33.1-24-03-53 (for notification), as well as the following information:

a. Date movement commenced;

b. Name (if not exporter), address, telephone, fax numbers, and email of primary exporter;

c. Company name and identification number of all transporters;

d. Identification (license, registered name or registration number) of means of transport, including types of packaging envisaged;

e. Any special precautions to be taken by transporters;

f. Certification signed by the exporter that no objection to the shipment has been lodged, as follows:

I certify that the above information is complete and correct to the best of my knowledge. I also certify that legally-enforceable written contractual obligations have been entered into, that any applicable insurance or other financial guarantees are or shall be in force covering the transboundary movement, and that:

1. All necessary consents have been received; or

2. The shipment is directed to a recovery facility within the Organization for Economic Cooperation and Development area and no objection has been received from any of the countries concerned within the thirty-day tacit consent period; or

3. The shipment is directed to a recovery facility preapproved for that type of waste within the Organization for Economic Cooperation and Development area; such an authorization has not been revoked, and no objection has been received from any of the countries concerned.

(Delete sentences that are not applicable)

Name: _____

Signature: _____

Date: _____

g. Appropriate signatures for each custody transfer (for example, transporter, importer, and owner or operator of the recovery facility).

3. Exporters also must comply with the special manifest requirements of subsections 1, 2, 3, 5, and 9 of section 33.1-24-03-21, and importers must comply with the import requirements of section 33.1-24-03-30.

4. Each United States person that has physical custody of the waste from the time the movement commences until it arrives at the recovery facility must sign the movement document (for example, transporter, importer, and owner or operator of the recovery facility).

5. Within three working days of the receipt of imports subject to sections 33.1-24-03-50 through 33.1-24-03-59, the owner or operator of the United States recovery facility must send signed

copies of the movement document to the exporter, to the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, to the state and to the competent authorities of the countries of export and transit. If the concerned United States recovery facility is a R12 or R13, or both, recovery facility as defined under section 33.1-24-03-51, the facility shall retain the original of the movement document for three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-55. Contracts.

1. Transboundary movements of hazardous wastes subject to the Amber control procedures are prohibited unless they occur under the terms of a valid written contract, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Such contracts or equivalent arrangements must be executed by the exporter and the owner or operator, or both, of the recovery facility, and must specify responsibilities for each. Contracts or equivalent arrangements are valid for the purposes of this section only if persons assuming obligations under the contracts or equivalent arrangements have appropriate legal status to conduct the operations specified in the contract or equivalent arrangements.
2. Contracts or equivalent arrangements must specify the name and identification number, where available, of subdivisions a through d:
 - a. The generator of each type of waste;
 - b. Each person who will have physical custody of the wastes;
 - c. Each person who will have legal control of the wastes; and
 - d. The recovery facility.
3. Contracts or equivalent arrangements must specify which party to the contract will assume responsibility for alternate management of the wastes if their disposition cannot be carried out as described in the notification of intent to export. In such cases, contracts must specify that:
 - a. The person having actual possession or physical control over the wastes will immediately inform the exporter and the competent authorities of the countries of export and import and, if the wastes are located in a country of transit, the competent authorities of that country; and
 - b. The person specified in the contract will assume responsibility for the adequate management of the wastes in compliance with applicable laws and regulations including, if necessary, arranging the return of wastes and, as the case may be, shall provide the notification for re-export.
4. Contracts must specify that the importer will provide the notification required in subsection 3 of section 33.1-24-03-52 prior to the re-export of controlled wastes to a third country.
5. Contracts or equivalent arrangements must include provisions for financial guarantees, if required by the competent authorities of any countries concerned, in accordance with applicable national or international law requirements.

[Note to subsection 5: Financial guarantees so required are intended to provide for alternate recycling, disposal, or other means of sound management of the wastes in cases where arrangements for the shipment and the recovery operations cannot be carried out as foreseen. The United States does not require such financial guarantees at this time; however, some Organization for Economic Cooperation and Development member countries do. It is the responsibility of the exporter to ascertain and comply with such requirements; in some cases, transporters or importers may refuse to enter into the necessary contracts absent specific references or certifications to financial guarantees.]

6. Contracts or equivalent arrangements must contain provisions requiring each contracting party to comply with all applicable requirements of sections 33.1-24-03-50 through 33.1-24-03-59.

7. Upon request by the environmental protection agency, United States exporters, importers, or recovery facilities must submit to the environmental protection agency copies of contracts, chain of contracts, or equivalent arrangements (when the movement occurs between parties controlled by the same corporate or legal entity). Information contained in the contracts or equivalent arrangements for which a claim of confidentiality is asserted in accordance with 40 CFR 2.203(b) will be treated as confidential and will be disclosed by the environmental protection agency only as provided in 40 CFR 260.2.

[Note to subsection 7: Although the United States does not require routine submission of contracts at this time, the Organization for Economic Cooperation and Development decision allows member countries to impose such requirements. When other Organization for Economic Cooperation and Development member countries require submission of partial or complete copies of the contract as a condition to granting consent to proposed movements, the environmental protection agency will request the required information; absent submission of such information, some Organization for Economic Cooperation and Development member countries may deny consent for the proposed movement.]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-56. Provisions relating to recognized traders.

1. A recognized trader who takes physical custody of a waste and conducts recovery operations (including storage prior to recovery) is acting as the owner or operator of a recovery facility and must be so authorized in accordance with all applicable federal laws and state rules.

2. A recognized trader acting as an exporter or importer for transboundary shipments of waste must comply with all the requirements of sections 33.1-24-03-50 through 33.1-24-03-59 associated with being an exporter or importer.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-57. Reporting and recordkeeping.

1. **Annual reports.** For all waste movements subject to sections 33.1-24-03-50 through 33.1-24-03-59, persons (for example, exporters and recognized traders) who meet the definition of primary exporter in section 33.1-24-03-18 or who initiate the movement documentation under section 33.1-24-03-54 shall file an annual report with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460,

and the state, no later than March 1 of each year summarizing the types, quantities, frequency, and ultimate destination of all such hazardous waste exported during the previous calendar year. (If the primary exporter or the person who initiates the movement document under section 33.1-24-03-54 is required to file an annual report for waste exports that are not covered under sections 33.1-24-03-50 through 33.1-24-03-59, the primary exporter or the person who initiates the movement document under section 33.1-24-03-54 may include all export information in one report provided the following information on exports of waste destined for recovery within the designated Organization for Economic Cooperation and Development member countries is contained in a separate section.) Such reports shall include all of the following:

- a. The identification number, name, and mailing and site address of the exporter filing the report;
- b. The calendar year covered by the report;
- c. The name and site address of each final recovery facility;
- d. By final recovery facility, for each hazardous waste exported, a description of the hazardous waste, the hazardous waste number (from sections 33.1-24-02-10 through 33.1-24-02-19), designation of waste types and applicable waste codes from the appropriate Organization for Economic Cooperation and Development waste list incorporated by reference in subsection 4 of section 33.1-24-03-59, department of transportation hazard class, the name and identification number (where applicable) for each transporter used, the total amount of hazardous waste shipped pursuant to sections 33.1-24-03-50 through 33.1-24-03-59, and number of shipments pursuant to each notification;
- e. In even numbered years, for each hazardous waste exported, except for hazardous waste produced by exporters of greater than one hundred kilograms but less than one thousand kilograms in a calendar month, and except for hazardous waste for which information was already provided pursuant to section 33.1-24-03-14.
 - (1) A description of the efforts undertaken during the year to reduce the volume and toxicity of the waste generated; and
 - (2) A description of the changes in volume and toxicity of the waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984; and
- f. A certification signed by the person acting as primary exporter or initiator of the movement document under section 33.1-24-03-54 that states:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

2. **Exception reports.** Any person who meets the definition of primary exporter in section 33.1-24-03-18 or who initiates the movement document under section 33.1-24-03-54 must file an exception report in lieu of the requirements of section 33.1-24-03-15 (if applicable) with the Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division (2254A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, and the state, if any of the following occurs:

- a. The primary exporter or the person who initiates the movement document has not received a copy of the hazardous waste manifest (if applicable) signed by the transporter identifying the point of departure of the waste from the United States, within forty-five days from the date it was accepted by the initial transporter;
- b. Within ninety days from the date the waste was accepted by the initial transporter, the exporter has not received written confirmation from the recovery facility that the hazardous waste was received;
- c. The waste is returned to the United States.

3. Recordkeeping.

- a. Persons who meet the definition of primary exporter in section 33.1-24-03-18 or who initiate the movement document under section 33.1-24-03-54 shall keep the following records:
 - (1) A copy of each notification of intent to export and all written consents obtained from the competent authorities of countries concerned for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
 - (2) A copy of each annual report for a period of at least three years from the due date of the report;
 - (3) A copy of any exception reports and a copy of each confirmation of delivery (for example, movement document) sent by the recovery facility to the exporter for at least three years from the date the hazardous waste was accepted by the initial transporter or received by the recovery facility, whichever is applicable; and
 - (4) A copy of each certificate of recovery sent by the recovery facility to the exporter for at least three years from the date that the recovery facility completed processing the waste shipment.
- b. The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the administrator or the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-58. [Reserved].

33.1-24-03-59. Organization for Economic Cooperation and Development waste lists.

1. For the purposes of sections 33.1-24-03-50 through 33.1-24-03-59, a waste is considered hazardous under United States national procedures, and subject to sections 33.1-24-03-50 through 33.1-24-03-59, if the waste:
 - a. Meets the federal definition of hazardous waste in 40 CFR 261.3; and
 - b. Is subject to either the manifesting requirements at sections 33.1-24-03-04 through 33.1-24-03-07, the universal waste management standards of sections 33.1-24-05-700 through 33.1-24-05-799 or the export requirements in the spent lead-acid battery management standards of sections 33.1-24-05-235 through 33.1-24-05-249.

2. If a waste is hazardous under subsection 1 of this section, it is subject to the Amber control procedures, regardless of whether it appears in Appendix 4 of the Organization for Economic Cooperation and Development decision, as defined in section 33.1-24-03-51.
3. The appropriate control procedures for hazardous wastes and hazardous waste mixtures are addressed in section 33.1-24-03-52.
4. The Organization for Economic Cooperation and Development waste lists, as set forth in Annex B ("Green List") and Annex C ("Amber List") (collectively "Organization for Economic Cooperation and Development waste lists") of the 2009 "guidance manual for the implementation of council decision C(2001) 107/FINAL, as amended, on the control of transboundary movements of wastes destined for recovery operations," are incorporated by reference. This incorporation by reference was approved by the director of the federal register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This material is incorporated as it exists on the date of the approval and a notice of any change in these materials will be published in the federal register. The materials are available for inspection at the United States Environmental Protection Agency, Docket Center Public Reading Room, Environmental Protection Agency West, Room 3334, 1301 Constitution Avenue NW, Washington, D.C. 20004, (Docket #EPA-HQ-RCRA-2005-0018) or at the national archives and records administration, and may be obtained from the Organization for Economic Cooperation and Development, Environment Directorate, 2 rue Andre Pascal, F-75775 Paris Cedex 16, France. For information on the availability of this material at the national archives and records administration, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>. To contact the environmental protection agency docket center public reading room, call 202-566-1744. To contact the Organization for Economic Cooperation and Development, call +33(0) 1 45 24 81 67.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-60. Alternative requirements for hazardous waste determination and accumulation of unwanted material for laboratories owned by eligible academic entities.

Sections 33.1-24-03-60 through 33.1-24-03-77 apply to laboratories owned by eligible academic entities that generate hazardous waste and choose to comply with these alternative requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-61. Definitions.

In addition to the definitions set forth in section 33.1-24-01-04, the following definitions apply to sections 33.1-24-03-60 through 33.1-24-03-77:

1. "Central accumulation area" means an onsite hazardous waste accumulation area subject to either subsections 1 and 2 of section 33.1-24-03-12 (large quantity generators), or subsections 4 through 6 of section 33.1-24-03-12 (small quantity generators). A central accumulation area at an eligible academic entity that chooses to be subject to sections 33.1-24-03-60 through 33.1-24-03-77 must also comply with section 33.1-24-03-72 when accumulating unwanted material, or hazardous waste, or both.

2. "College or university" means a private or public, post-secondary, degree-granting, academic institution, that is accredited by an accrediting agency listed annually by the United States department of education.
3. "Eligible academic entity" means a college or university, or a nonprofit research institute that is owned by or has a formal written affiliation agreement with a college or university, or a teaching hospital that is owned by or has a formal written affiliation agreement with a college or university.
4. "Formal written affiliation agreement" for a nonprofit research institute means a written document that establishes a relationship between institutions for the purposes of research or education, or both, and is signed by authorized representatives, as defined by section 33.1-24-01-04, from each institution. A relationship on a project-by-project, or grant-by-grant basis, is not considered a formal written affiliation agreement. A formal written affiliation agreement for a teaching hospital means a master affiliation agreement and program letter of agreement, as defined by the accreditation council for graduate medical education, with an accredited medical program or medical school.
5. "Laboratory" means an area owned by an eligible academic entity where relatively small quantities of chemicals and other substances are used on a nonproduction basis for teaching or research (or diagnostic purposes at a teaching hospital) and are stored and used in containers that are easily manipulated by one person. Photo laboratories, art studios, and field laboratories are considered laboratories. Areas such as chemical stockrooms and preparatory laboratories that provide a support function to teaching, or research laboratories (or diagnostic laboratories at teaching hospitals), are also considered laboratories.
6. "Laboratory clean-out" means an evaluation of the inventory of chemicals and other materials in a laboratory that are no longer needed or that have expired and the subsequent removal of those chemicals or other unwanted materials from the laboratory. A clean-out may occur for several reasons. It may be on a routine basis (for example, at the end of a semester or academic year), or as a result of a renovation, relocation, or change in laboratory supervisor, or occupant, or both. A regularly scheduled removal of unwanted material as required by section 33.1-24-03-69 does not qualify as a laboratory clean-out.
7. "Laboratory worker" means a person who handles chemicals, or unwanted material, or both, in a laboratory and may include, but is not limited to, faculty, staff, postdoctoral fellows, interns, researchers, technicians, supervisors or managers, and principal investigators. A person does not need to be paid or otherwise compensated for work in the laboratory to be considered a laboratory worker. Undergraduate and graduate students in a supervised classroom setting are not laboratory workers.
8. "Nonprofit research institute" means an organization that conducts research as its primary function and files as a nonprofit organization under the tax code of 26 United States code 501(c)(3).
9. "Reactive acutely hazardous unwanted material" means an unwanted material that is one of the acutely hazardous commercial chemical products listed in subsection 5 of section 33.1-24-02-18 for reactivity.
10. "Teaching hospital" means a hospital that trains students to become physicians, nurses, or other health or laboratory personnel.
11. "Trained professional" means a person who has completed the applicable hazardous waste training requirements of section 33.1-24-05-07 for large quantity generators, or is knowledgeable about normal operations and emergencies in accordance with paragraph 3 of subdivision e of subsection 4 of section 33.1-24-03-12 for small quantity generators and

conditionally exempt small quantity generators. A trained professional may be an employee of the eligible academic entity or may be a contractor or vendor who meets the requisite training requirements.

12. "Unwanted material" means any chemical, mixtures of chemicals, products of experiments, or other material from a laboratory that is no longer needed, wanted, or usable in the laboratory and that is destined for hazardous waste determination by a trained professional. Unwanted materials include reactive acutely hazardous unwanted materials and materials that may eventually be determined not to be solid waste pursuant to section 33.1-24-02-02, or a hazardous waste pursuant to section 33.1-24-02-03. If an eligible academic entity elects to use another equally effective term in lieu of "unwanted material", as allowed by paragraph 1 of subdivision a of subsection 1 of section 33.1-24-03-67, the equally effective term has the same meaning and is subject to the same requirements as "unwanted material" under sections 33.1-24-03-60 through 33.1-24-03-77.

13. "Working container" means a small container (for example, two gallons or less) that is in use at a laboratory bench, hood, or other work station, to collect unwanted material from a laboratory experiment or procedure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-62. Applicability of sections 33.1-24-03-60 through 33.1-24-03-77.

1. Large quantity generators and small quantity generators. Sections 33.1-24-03-60 through 33.1-24-03-77 provide alternative requirements to the requirements in section 33.1-24-03-02 and subsection 3 of section 33.1-24-03-12 for the hazardous waste determination and accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to sections 33.1-24-03-60 through 33.1-24-03-77, provided that the eligible academic entity completes the notification requirements of section 33.1-24-03-64.

2. Conditionally exempt small quantity generators. Sections 33.1-24-03-60 through 33.1-24-03-77 provide alternative requirements to the conditional exemption in subsection 2 of section 33.1-24-02-05 for the accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to sections 33.1-24-03-60 through 33.1-24-03-77, provided that the eligible academic entity completes the notification requirements of section 33.1-24-03-64.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-63. Complying with sections 33.1-24-03-60 through 33.1-24-03-77 is optional for eligible academic entities.

1. Large quantity generators and small quantity generators. Eligible academic entities have the option of complying with sections 33.1-24-03-60 through 33.1-24-03-77 with respect to the eligible academic entity's laboratories, as an alternative to complying with the requirements of section 33.1-24-03-02 and subsection 3 of section 33.1-24-03-12.

2. Conditionally exempt small quantity generators. Eligible academic entities have the option of complying with sections 33.1-24-03-60 through 33.1-24-03-77 with respect to the eligible academic entity's laboratories, as an alternative to complying with the conditional exemption of subsection 2 of section 33.1-24-02-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-64. Notification by an eligible academic entity electing to comply with sections 33.1-24-03-60 through 33.1-24-03-77.

1. An eligible academic entity must notify the department, in writing, using the identification form that the eligible academic entity is electing to be subject to the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 for all the laboratories owned by the eligible academic entity under the same identification number. An eligible academic entity that is a conditionally exempt small quantity generator and does not have an identification number must notify that the eligible academic entity is electing to be subject to the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 for all the laboratories owned by the eligible academic entity that are onsite, as defined by section 33.1-24-01-04. An eligible academic entity must submit a separate notification for each identification number (or site, for conditionally exempt small quantity generators) that is electing to be subject to the requirements of sections 33.1-24-03-60 through 33.1-24-03-77, and must submit the identification form before the eligible academic entity begins operating under sections 33.1-24-03-60 through 33.1-24-03-77.
2. When submitting the identification form, the eligible academic entity must, at a minimum, fill out the following fields on the form:
 - a. Reason for submittal.
 - b. Identification number (except for conditionally exempt small quantity generators).
 - c. Site name.
 - d. Site location information.
 - e. Site land type.
 - f. North American industry classification system (NAICS) codes for the site.
 - g. Site mailing address.
 - h. Site contact person.
 - i. Operator and legal owner of the site.
 - j. Type of regulated waste activity.
 - k. Certification.
3. An eligible academic entity must keep a copy of the notification on file at the eligible academic entity for as long as eligible academic entity's laboratories are subject to sections 33.1-24-03-60 through 33.1-24-03-77.
4. A teaching hospital that is not owned by a college or university must keep a copy of the teaching hospital's formal written affiliation agreement with a college or university on file at the teaching hospital for as long as the teaching hospital's laboratories are subject to sections 33.1-24-03-60 through 33.1-24-03-77.
5. A nonprofit research institute that is not owned by a college or university must keep a copy of the nonprofit research institute's formal written affiliation agreement with a college or university

on file at the nonprofit research institute for as long as the nonprofit research institute's laboratories are subject to sections 33.1-24-03-60 through 33.1-24-03-77.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-65. Notification by an eligible academic entity electing to withdraw from complying with sections 33.1-24-03-60 through 33.1-24-03-77.

1. An eligible academic entity must notify the department, in writing, using the identification form, that it is electing to no longer be subject to the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 for all the laboratories owned by the eligible academic entity under the same identification number and that the eligible academic entity will comply with the requirements of section 33.1-24-03-02 and subsection 3 of section 33.1-24-03-12 for small quantity generators and large quantity generators. An eligible academic entity that is a conditionally exempt small quantity generator and does not have an identification number must notify that the eligible academic entity is withdrawing from the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 for all the laboratories owned by the eligible academic entity that are onsite and that the eligible academic entity will comply with the conditional exemption in subsection 2 of section 33.1-24-02-05. An eligible academic entity must submit a separate notification (identification form) for each identification number (or site, for conditionally exempt small quantity generators) that is withdrawing from the requirements of sections 33.1-24-03-60 through 33.1-24-03-77 and must submit the identification form before the eligible academic entity begins operating under the requirements of section 33.1-24-03-02 and subsection 3 of section 33.1-24-03-12 for small quantity generators and large quantity generators, or subsection 2 of section 33.1-24-02-05 for conditionally exempt small quantity generators.

2. When submitting the identification form, the eligible academic entity must, at a minimum, fill out the following fields on the form:

a. Reason for submittal.

b. Identification number (except for conditionally exempt small quantity generators).

c. Site name.

d. Site location information.

e. Site land type.

f. North American industry classification system (NAICS) codes for the site.

g. Site mailing address.

h. Site contact person.

i. Operator and legal owner of the site.

j. Type of regulated waste activity.

k. Certification.

3. An eligible academic entity must keep a copy of the withdrawal notice on file at the eligible academic entity for three years from the date of the notification.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-66. Requirements of sections 33.1-24-03-60 through 33.1-24-03-77.

An eligible academic entity that chooses to be subject to sections 33.1-24-03-60 through 33.1-24-03-77 is not required to have interim status or a hazardous waste permit for the accumulation of unwanted material and hazardous waste in an eligible academic entity's laboratories, provided the laboratories comply with the provisions of sections 33.1-24-03-60 through 33.1-24-03-77, and the eligible academic entity has a laboratory management plan in accordance with section 33.1-24-03-75 that describes how the laboratories owned by the eligible academic entity will comply with the requirements of sections 33.1-24-03-60 through 33.1-24-03-77.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-67. Labeling and management standards for containers of unwanted material in laboratories.

An eligible academic entity must manage containers of unwanted material while in the laboratory in accordance with the requirements in this section.

1. Label unwanted material as follows:

a. The following information must be affixed or attached to the container:

(1) The words "unwanted material" or another equally effective term that is to be used consistently by the eligible academic entity and that is identified in part 1 of the laboratory management plan; and

(2) Sufficient information to alert emergency responders to the contents of the container. Examples of information that would be sufficient to alert emergency responders to the contents of the container include, but are not limited to:

(a) The name of the chemicals; and

(b) The type or class of chemical, such as organic solvents or halogenated organic solvents.

b. The following information may be affixed or attached to the container, but must at a minimum be associated with the container:

(1) The date that the unwanted material first began accumulating in the container; and

(2) Information sufficient to allow a trained professional to properly identify whether an unwanted material is a solid and hazardous waste and to assign the proper hazardous waste codes, pursuant to section 33.1-24-03-02. Examples of information that would allow a trained professional to properly identify whether an unwanted material is a solid or hazardous waste include, but are not limited to:

(a) The name or description of the chemical contents, or both, or composition of the unwanted material, or, if known, the product of the chemical reaction;

(b) Whether the unwanted material has been used or is unused; and

(c) A description of the manner in which the chemical was produced or processed, if applicable.

2. Management of containers in the laboratory. An eligible academic entity must properly manage containers of unwanted material in the laboratory to assure safe storage of the unwanted material, to prevent leaks, spills, emissions to the air, adverse chemical reactions, and dangerous situations that may result in harm to human health or the environment. Proper container management must include the following:

a. Containers are maintained and kept in good condition and damaged containers are replaced, overpacked, or repaired; and

b. Containers are compatible with their contents to avoid reactions between the contents and the container; and are made of, or lined with, material that is compatible with the unwanted material so that the container's integrity is not impaired, and

c. Containers must be kept closed at all times, except:

(1) When adding, removing, or bulking unwanted material; or

(2) A working container may be open until the end of the procedure or work shift, or until it is full, whichever comes first, at which time the working container must either be closed or the contents emptied into a separate container that is then closed; or

(3) When venting of a container is necessary.

(a) For the proper operation of laboratory equipment, such as with in-line collection of unwanted materials from high performance liquid chromatographs; or

(b) To prevent dangerous situations, such as buildup of extreme pressure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-68. Training.

An eligible academic entity must provide training to all individuals working in a laboratory at the eligible academic entity, as follows:

1. Training for laboratory workers and students must be commensurate with their duties so they understand the requirements in sections 33.1-24-03-60 through 33.1-24-03-77 and can implement them.

2. An eligible academic entity can provide training for laboratory workers and students in a variety of ways, including, but not limited to:

a. Instruction by the professor or laboratory manager before or during an experiment;

b. Formal classroom training;

c. Electronic or written training, or both;

d. On-the-job training; or

e. Written or oral exams.

3. An eligible academic entity that is a large quantity generator must maintain documentation for the durations specified in subsection 5 of section 33.1-24-05-07 demonstrating training for all laboratory workers that is sufficient to determine whether laboratory workers have been trained. Examples of documentation demonstrating training can include, but are not limited to, the following:

a. Sign-in or attendance sheets for training sessions, or both;

b. Syllabus for training sessions;

c. Certificate of training completion; or

d. Test results.

4. A trained professional must:

a. Accompany the transfer of unwanted material and hazardous waste when the unwanted material and hazardous waste is removed from the laboratory; and

b. Make the hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-69. Removing containers of unwanted material from the laboratory.

1. Removing containers of unwanted material on a regular schedule. An eligible academic entity must either:

a. Remove all containers of unwanted material from each laboratory on a regular interval, not to exceed six months; or

b. Remove containers of unwanted material from each laboratory within six months of each container's accumulation start date.

2. The eligible academic entity must specify in part I of its laboratory management plan whether the eligible academic entity will comply with subdivision a or b of subsection 1 for the regular removal of unwanted material from the eligible academic entity's laboratories.

3. The eligible academic entity must specify in part II of its laboratory management plan how the eligible academic entity will comply with subdivision a or b of subsection 1 and develop a schedule for regular removals of unwanted material from the eligible academic entity's laboratories.

4. Removing containers of unwanted material when volumes are exceeded.

a. If a laboratory accumulates a total volume of unwanted material (including reactive acutely hazardous unwanted material) in excess of fifty-five gallons before the regularly scheduled removal, the eligible academic entity must ensure that all containers of unwanted material in the laboratory (including reactive acutely hazardous unwanted material):

(1) Are marked on the label that is associated with the container (or on the label that is affixed or attached to the container) with the date that fifty-five gallons is exceeded; and

(2) Are removed from the laboratory within ten calendar days of the date that fifty-five gallons was exceeded, or at the next regularly scheduled removal, whichever comes first.

b. If a laboratory accumulates more than one quart of reactive acutely hazardous unwanted material before the regularly scheduled removal, then the eligible academic entity must ensure that all containers of reactive acutely hazardous unwanted material:

(1) Are marked on the label that is associated with the container (or on the label that is affixed or attached to the container) with the date that one quart is exceeded; and

(2) Are removed from the laboratory within ten calendar days of the date that one quart was exceeded, or at the next regularly scheduled removal, whichever comes first.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-70. Where and when to make the hazardous waste determination and where to send containers of unwanted material upon removal from the laboratory.

1. Large quantity generators and small quantity generators. An eligible academic entity must ensure that a trained professional makes a hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material in any of the following areas:

a. In the laboratory before the unwanted material is removed from the laboratory, in accordance with section 33.1-24-03-71.

b. Within four calendar days of arriving at an onsite central accumulation area, in accordance with section 33.1-24-03-72.

c. Within four calendar days of arriving at an onsite interim status or permitted treatment, storage, or disposal facility, in accordance with section 33.1-24-03-73.

2. Conditionally exempt small quantity generators. An eligible academic entity must ensure that a trained professional makes a hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material in the laboratory before the unwanted material is removed from the laboratory, in accordance with section 33.1-24-03-71.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-71. Hazardous waste determination in the laboratory before the unwanted material is removed.

If an eligible academic entity makes the hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material in the laboratory, the eligible academic entity must comply with the following:

1. A trained professional must make the hazardous waste determination, pursuant to section 33.1-24-03-02, before the unwanted material is removed from the laboratory.

2. If an unwanted material is a hazardous waste, the eligible academic entity must:

a. Write the words "hazardous waste" on the container label that is affixed or attached to the container, before the hazardous waste may be removed from the laboratory;

b. Write the appropriate hazardous waste codes on the label that is associated with the container (or the label that is affixed or attached to the container) before the hazardous waste is transported offsite; and

c. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05, in the calendar month that the hazardous waste determination was made.

3. A trained professional must accompany all hazardous waste that is transferred from the laboratory, or laboratories, to an onsite central accumulation area or onsite interim status or permitted treatment, storage, or disposal facility.

4. When hazardous waste is removed from the laboratory:

a. Large quantity generators and small quantity generators must ensure it is taken directly from the laboratory, or laboratories, to an offsite central accumulation area, or onsite interim status or permitted treatment, storage, or disposal facility, or transported offsite.

b. Conditionally exempt small quantity generators must ensure it is taken directly from the laboratory, or laboratories, to any of the types of facilities listed in subdivision c of subsection 6 of section 33.1-24-02-05 for acute hazardous waste, or subdivision c of subsection 7 of section 33.1-24-02-05 for hazardous waste.

5. An unwanted material that is a hazardous waste is subject to all applicable provisions of article 33.1-24, North Dakota hazardous waste management rules, when it is removed from the laboratory.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-72. Hazardous waste determination at an onsite central accumulation area.

If an eligible academic entity makes the hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material at an onsite central accumulation area, the eligible academic entity must comply with the following:

1. A trained professional must accompany all unwanted material that is transferred from the laboratory, or laboratories, to an onsite central accumulation area.

2. All unwanted material removed from the laboratory, or laboratories, must be taken directly from the laboratory, or laboratories, to the onsite central accumulation area.

3. The unwanted material becomes subject to the generator accumulation requirements of subsection 1 of section 33.1-24-03-12 for large quantity generators or subsections 4 through 6 of section 33.1-24-03-12 for small quantity generators as soon as the unwanted material arrives in the central accumulation area, except for the "hazardous waste" labeling requirements of subdivision c of subsection 1 of section 33.1-24-03-12.

4. A trained professional must determine, pursuant to section 33.1-24-03-02, if the unwanted material is a hazardous waste within four calendar days of the unwanted material's arrival at the onsite central accumulation area.

5. If the unwanted material is a hazardous waste, the eligible academic entity must:

- a. Write the words "hazardous waste" on the container label that is affixed or attached to the container, within four calendar days of arriving at the onsite central accumulation area and before the hazardous waste may be removed from the onsite central accumulation area; and
- b. Write the appropriate hazardous waste codes on the container label that is associated with the container (or on the label that is affixed or attached to the container) before the hazardous waste may be treated, or disposed of onsite or transported offsite; and
- c. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05 in the calendar month that the hazardous waste determination was made; and
- d. Manage the hazardous waste according to all applicable provisions of article 33.1-24, North Dakota hazardous waste management rules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-73. Hazardous waste determination at an onsite interim status or permitted treatment, storage, or disposal facility.

If an eligible academic entity makes the hazardous waste determination, pursuant to section 33.1-24-03-02, for unwanted material at an onsite interim status or permitted treatment, storage, or disposal facility, the eligible academic entity must comply with the following:

1. A trained professional must accompany all unwanted material that is transferred from the laboratory, or laboratories, to an onsite interim status or permitted treatment, storage, or disposal facility.
2. All unwanted material removed from the laboratory, or laboratories, must be taken directly from the laboratory, or laboratories, to the onsite interim status or permitted treatment, storage, or disposal facility.
3. The unwanted material becomes subject to the terms of the eligible academic entity's hazardous waste permit or interim status as soon as it arrives in the onsite treatment, storage, or disposal facility.
4. A trained professional must determine, pursuant to section 33.1-24-03-02, if the unwanted material is a hazardous waste within four calendar days of the unwanted material's arrival at the onsite interim status or permitted treatment, storage, or disposal facility.
5. If the unwanted material is a hazardous waste, the eligible academic entity must:
 - a. Write the words "hazardous waste" on the container label that is affixed or attached to the container within four calendar days of arriving at the onsite interim status or permitted treatment, storage, or disposal facility and before the hazardous waste may be removed from the onsite interim status or permitted treatment, storage, or disposal facility; and
 - b. Write the appropriate hazardous waste codes on the container label that is associated with the container (or on the label that is affixed or attached to the container) before the hazardous waste may be treated or disposed onsite, or transported offsite; and

- c. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05 in the calendar month that the hazardous waste determination was made; and
- d. Manage the hazardous waste according to all applicable provisions of article 33.1-24, North Dakota hazardous waste management rules.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-74. Laboratory clean-outs.

- 1. One time per twelve-month period for each laboratory, an eligible academic entity may choose to conduct a laboratory clean-out that is subject to all the applicable requirements of sections 33.1-24-03-60 through 33.1-24-03-77, except that:

- a. If the volume of unwanted material in the laboratory exceeds fifty-five gallons (or one quart of reactive acutely hazardous unwanted material), the eligible academic entity is not required to remove all unwanted materials from the laboratory within ten calendar days of exceeding fifty-five gallons (or one quart of reactive acutely hazardous unwanted material), as required by section 33.1-24-03-69. Instead, the eligible academic entity must remove all unwanted materials from the laboratory within thirty calendar days from the start of the laboratory clean-out; and

- b. For the purposes of onsite accumulation, an eligible academic entity is not required to count a hazardous waste that is an unused commercial chemical product (listed in sections 33.1-24-02-15 through 33.1-24-02-19, or exhibiting one or more characteristics in sections 33.1-24-02-10 through 33.1-24-02-14) generated solely during the laboratory clean-out toward its hazardous waste generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05. An unwanted material that is generated prior to the beginning of the laboratory clean-out and is still in the laboratory at the time the laboratory clean-out commences must be counted toward hazardous waste generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05, if it is determined to be hazardous waste; and

- c. For the purposes of offsite management, an eligible academic entity must count all its hazardous waste, regardless of whether the hazardous waste was counted toward generator status under subdivision b, and if the eligible academic entity generates more than one kilogram per month of acute hazardous waste, or one hundred kilograms per month of hazardous waste (for example, the conditionally exempt small quantity generator limits of section 33.1-24-02-05), the hazardous waste is subject to all applicable hazardous waste regulations when the hazardous waste is transported offsite; and

- d. An eligible academic entity must document the activities of the laboratory clean-out. The documentation must, at a minimum, identify the laboratory being cleaned out, the date the laboratory clean-out begins and ends, and the volume of hazardous waste generated during the laboratory clean-out. The eligible academic entity must maintain the records for a period of three years from the date the clean-out ends; and

- 2. For all other laboratory clean-outs conducted during the same twelve-month period, an eligible academic entity is subject to all the applicable requirements of sections 33.1-24-03-60 through 33.1-24-03-77, including, but not limited to:

- a. The requirement to remove all unwanted materials from the laboratory within ten calendar days of exceeding fifty-five gallons (or one quart of reactive acutely hazardous unwanted material), as required by section 33.1-24-03-69; and
- b. The requirement to count all hazardous waste, including unused hazardous waste, generated during the laboratory clean-out toward its hazardous waste generator status, pursuant to subsections 3 and 4 of section 33.1-24-02-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-75. Laboratory management plan.

An eligible academic entity must develop and retain a written laboratory management plan, or revise an existing written plan. The laboratory management plan is a site-specific document that describes how the eligible academic entity will manage unwanted materials in compliance with sections 33.1-24-03-60 through 33.1-24-03-77. An eligible academic entity may write one laboratory management plan for all the laboratories owned by the eligible academic entity that have chosen to be subject to sections 33.1-24-03-60 through 33.1-24-03-77, even if the laboratories are located at sites with different identification numbers. The laboratory management plan must contain two parts with a total of nine elements identified in subsections 1 and 2. In part I of the eligible academic entity's laboratory management plan, an eligible academic entity must describe the eligible academic entity's procedures for each of the elements listed in subsection 1. An eligible academic entity must implement and comply with the specific provisions that the eligible academic entity develops to address the elements in part I of the laboratory management plan. In part II of the eligible academic entity's laboratory management plan, an eligible academic entity must describe the eligible academic entity's best management practices for each of the elements listed in subsection 2. The specific actions taken by an eligible academic entity to implement each element in part II of the eligible academic entity's laboratory management plan may vary from the procedures described in the eligible academic entity's laboratory management plan, without constituting a violation of sections 33.1-24-03-60 through 33.1-24-03-77. An eligible academic entity may include additional elements and best management practices in part II of the eligible academic entity's laboratory management plan if the eligible academic entity chooses.

1. The eligible academic entity must implement and comply with the specific provisions of part I of the eligible academic entity's laboratory management plan. In part I of the eligible academic entity's laboratory management plan, an eligible academic entity must:
 - a. Describe procedures for container labeling in accordance with subsection 1 of section 33.1-24-03-67, as follows:
 - (1) Identifying whether the eligible academic entity will use the term "unwanted material" on the containers in the laboratory. If not, identify an equally effective term that will be used in lieu of "unwanted material" and consistently by the eligible academic entity. The equally effective term, if used, has the same meaning and is subject to the same requirements as "unwanted material".
 - (2) Identifying the manner in which information that is "associated with the container" will be imparted.
 - b. Identify whether the eligible academic entity will comply with subdivisions a or b of subsection 1 of section 33.1-24-03-69 for regularly scheduled removals of unwanted material from the laboratory.

2. In part II of laboratory management plan, an eligible academic entity must:

a. Describe intended best practices for container labeling and management (see the required standards at section 33.1-24-03-67).

b. Describe intended best practices for providing training for laboratory workers and students commensurate with their duties (subsection 1 of section 33.1-24-03-68).

c. Describe intended best practices for providing training to ensure safe onsite transfers of unwanted material and hazardous waste by trained professionals (subdivision a of subsection 4 of section 33.1-24-03-68).

d. Describe intended best practices for removing unwanted material from the laboratory, including:

(1) For regularly scheduled removals. Develop a regular schedule for identifying and removing unwanted materials from its laboratories (subdivisions a and b of subsection 1 of section 33.1-24-03-69).

(2) For removals when maximum volumes are exceeded:

(a) Describe intended best practices for removing unwanted materials from the laboratory within ten calendar days when unwanted materials have exceeded the unwanted materials maximum volumes (subsection 4 of section 33.1-24-03-69).

(b) Describe intended best practices for communicating that unwanted materials have exceeded the unwanted materials maximum volumes.

e. Describe intended best practices for making hazardous waste determinations, including specifying the duties of the individuals involved in the process (section 33.1-24-03-02, and sections 33.1-24-03-70 through 33.1-24-03-73).

f. Describe intended best practices for laboratory clean-outs, if the eligible academic entity plans to use the incentives for laboratory clean-outs provided in section 33.1-24-03-74, including:

(1) Procedures for conducting laboratory clean-outs (subdivisions a through c of subsection 1 of section 33.1-24-03-74).

(2) Procedures for documenting laboratory clean-outs (subdivision d of subsection 1 of section 33.1-24-03-74).

g. Describe intended best practices for emergency prevention, including:

(1) Procedures for emergency prevention, notification, and response, appropriate to the hazards in the laboratory; and

(2) A list of chemicals that the eligible academic entity has, or is likely to have, that become more dangerous when the chemicals exceed their expiration date, or as they degrade, or both; and

(3) Procedures to safely dispose of chemicals that become more dangerous when the chemicals exceed their expiration date, or as they degrade, or both; and

(4) Procedures for the timely characterization of unknown chemicals.

3. An eligible academic entity must make the eligible academic entity's laboratory management plan available to laboratory workers, students, or any others at the eligible academic entity who request the laboratory management plan.
4. An eligible academic entity must review and revise the eligible academic entity's laboratory management plan, as needed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-76. Unwanted material that is not solid waste or hazardous waste.

1. If an unwanted material does not meet the definition of solid waste in section 33.1-24-02-02, the unwanted material is no longer subject to sections 33.1-24-03-60 through 33.1-24-03-77, or to article 33.1-24, North Dakota hazardous waste management rules.
2. If an unwanted material does not meet the definition of hazardous waste in section 33.1-24-02-03, the unwanted material is no longer subject to sections 33.1-24-03-60 through 33.1-24-03-77, or to article 33.1-24, North Dakota hazardous waste management rules, but must be managed in compliance with any other application rules, or conditions, or both.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-77. Nonlaboratory hazardous waste generated at an eligible academic entity.

An eligible academic entity that generates hazardous waste outside of a laboratory is not eligible to manage that hazardous waste under sections 33.1-24-03-60 through 33.1-24-03-77; and

1. Remains subject to the generator requirements of section 33.1-24-03-02 and subsection 3 of section 33.1-24-03-12 for large quantity generators and small quantity generators (if the hazardous waste is managed in a satellite accumulation area), and all other applicable generator requirements of chapter 33.1-24-03, with respect to that hazardous waste; or
2. Remains subject to the conditional exemption of subsection 2 of section 33.1-24-02-05 for conditionally exempt small quantity generators, with respect to that hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-03-78.[Reserved].

33.1-24-03-79.[Reserved].

33.1-24-03-80.[Reserved].

33.1-24-03-81.[Reserved].

33.1-24-03-82.[Reserved].

33.1-24-03-83.[Reserved].

33.1-24-03-84.[Reserved].

33.1-24-03-85.[Reserved].

APPENDIX I

UNIFORM HAZARDOUS WASTE MANIFEST AND INSTRUCTIONS (Environmental Protection Agency Forms 8700-22 and 8700-22A and Their Instructions)

United States Environmental Protection Agency Form 8700-22

Read all instructions before completing this form.

1. This form has been designed for use on a 12-pitch (elite) typewriter which is also compatible with standard computer printers; a firm point pen may also be used - press down hard.
2. State and federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to use this form (8700-22) and, if necessary, the continuation sheet (form 8700-22A) for both interstate and intrastate transportation of hazardous waste.
3. State regulations also require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage and disposal facilities to complete the following information:
 - a. State regulations under section 33.1-24-03-16 (additional reporting) requires the generator to provide the department with a signed copy of the manifest when first signed by the generator and transporter and as signed by and received from the designated facility or alternate facility.

* * * * *

The following statement must be included with each uniform hazardous waste manifest, either on the form, in the instructions to the form, or accompanying the form:

Public reporting burden for this collection of information is estimated to average: thirty minutes for generators, ten minutes for transporters, and twenty-five minutes for owners or operators of treatment, storage, and disposal facilities. This includes time for reviewing instructions, gathering data, completing, reviewing, and transmitting the form. Any correspondence regarding the Paperwork Reduction Act burden statement for the manifest must be sent to the director of the collection strategies division in environmental protection agency's office of information collection at the following address: United States Environmental Protection Agency (2822T), 1200 Pennsylvania Avenue NW, Washington, D.C. 20460. Do not send the completed form to this address.

I. Instructions for generators

Item 1. Generator's identification number

Enter the generator's environmental protection agency twelve digit identification number, or the state generator identification number if the generator site does not have an environmental protection agency identification number.

Item 2. Page 1 of

Enter the total number of pages used to complete this manifest (for example, the first page (environmental protection agency form 8700-22) plus the number of continuation sheets (environmental protection agency form 8700-22A), if any).

Item 3. Emergency response phone number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored twenty-four hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup or incident mitigation, or both, information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

NOTE: Emergency response phone number information should only be entered in item 3 when there is one phone number that applies to all the waste materials described in item 9b. If a situation (for example, consolidated shipments) arises where more than one emergency response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in item 9b.

Item 4. Manifest tracking number

This unique tracking number must be preprinted on the manifest by the forms printer.

Item 5. Generator's mailing address, phone number, and site address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or the generator's authorized agent may be reached to provide instructions in the event the designated, or alternate, or both, (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 company name and identification number

Enter the company name and environmental protection agency identification number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 company name and identification number

If applicable, enter the company name and environmental protection agency identification number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here. If more than two transporters are needed, use a continuation sheet or sheets (environmental protection agency form 8700- 22A).

Item 8. Designated facility name, site address, and identification number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the environmental protection agency twelve digit identification number of the facility.

Item 9. United States department of transportation description (including proper shipping name, hazard class or division, identification number, and packing group)

Item 9a. If the wastes identified in item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next to the corresponding hazardous material identified in item 9b.

Item 9b. Enter the United States department of transportation proper shipping name, hazard class or division, identification number (UN/NA) and packing group for each waste as identified in 49 CFR 172. Include technical name or names and reportable quantity references, if applicable.

NOTE: If additional space is needed for waste descriptions, enter these additional descriptions in item 27 on the continuation sheet (environmental protection agency form 8700–22A). Also, if more than one emergency response phone number applies to the various wastes described in either item 9b or item 27, enter applicable emergency response phone numbers immediately following the shipping descriptions for those items.

Item 10. Containers (number and type)

Enter the number of containers for each waste and the appropriate abbreviation from table I (below) for the type of container.

Table I. - Types of Containers

<u>BA</u>	<u>=</u>	<u>Burlap, cloth, paper, or plastic bags</u>
<u>CF</u>	<u>=</u>	<u>Fiber or plastic boxes, cartons, cases</u>
<u>CM</u>	<u>=</u>	<u>Metal boxes, cartons, cases (including roll-offs)</u>
<u>CW</u>	<u>=</u>	<u>Wooden boxes, cartons, cases</u>
<u>CY</u>	<u>=</u>	<u>Cylinders</u>
<u>DF</u>	<u>=</u>	<u>Fiberboard or plastic drums, barrels, kegs</u>
<u>DM</u>	<u>=</u>	<u>Metal drums, barrels, kegs</u>
<u>DT</u>	<u>=</u>	<u>Dump truck</u>
<u>DW</u>	<u>=</u>	<u>Wooden drums, barrels, kegs</u>
<u>HG</u>	<u>=</u>	<u>Hopper or gondola cars</u>
<u>TC</u>	<u>=</u>	<u>Tank cars</u>
<u>TP</u>	<u>=</u>	<u>Portable tanks</u>
<u>TI</u>	<u>=</u>	<u>Cargo tanks (tank trucks)</u>

Item 11. Total quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow the generator to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of measure (weight or volume)

Enter, in designated boxes, the appropriate abbreviation from table II (below) for the unit of measure.

Table II - Units of Measure

<u>G</u>	<u>=</u>	<u>Gallons (liquids only)</u>
<u>K</u>	<u>=</u>	<u>Kilograms</u>
<u>L</u>	<u>=</u>	<u>Liters (liquids only)</u>

<u>M</u>	=	<u>Metric tons (1000 kilograms)</u>
<u>N</u>	=	<u>Cubic meters</u>
<u>P</u>	=	<u>Pounds</u>
<u>T</u>	=	<u>Tons (2000 pounds)</u>
<u>Y</u>	=	<u>Cubic yards</u>

NOTE: Tons, metric tons, cubic meters, and cubic yards should only be reported in connection with very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste codes

Enter up to six federal and state waste codes to describe each waste stream identified in item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special handling instructions and additional information.

1. Generators may enter any special handling or shipment specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are reshipped under a second manifest; and the specification of polychlorinated biphenyl waste descriptions and polychlorinated biphenyl out of service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's or offeror's certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of Resource Conservation and Recovery Act are also certifying that they have complied with the waste minimization requirements. The generator's certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, or placarded, or both, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations. If export shipment and I am the primary exporter, I certify that the contents of this consignment conform to the terms of the attached environmental protection agency acknowledgment of consent". When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or offeror personnel may preprint the words, "on behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator or offeror

certification, to indicate that the individual signs as the employee or agent of the named principal.

NOTE: All of the above information except the handwritten signature required in item 15 may be preprinted.

II. Instructions for international shipment block

Item 16. International shipments

For export shipments, the primary exporter must check the export box, and enter the point of exit (city and state) from the United States. For import shipments, the importer must check the import box and enter the point of entry (city and state) into the United States. For exports, the transporter must sign and date the manifest to indicate the day the shipment left the United States. Transporters of hazardous waste shipments must deliver a copy of the manifest to the United States customs when exporting the waste across United States borders.

III. Instructions for transporters

Item 17. Transporters' acknowledgments of receipt

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt. Only one signature per transportation company is required. Signatures are not required to track the movement of wastes in and out of transfer facilities, unless there is a change of custody between transporters. If applicable, enter the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

NOTE: Transporters carrying imports, who are acting as importers, may have responsibilities to enter information in the international shipments block. Transporters carrying exports may also have responsibilities to enter information in the international shipments block. See above instructions for item 16.

IV. Instructions for owners and operators of treatment, storage, and disposal facilities

Item 18. Discrepancy

Item 18a. Discrepancy indication space

1. The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any discrepancies between the waste described on the manifest and the waste actually received at the facility. Manifest discrepancies are: significant differences (as defined by subsection 2 of section 33.1-24-05-39) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives, rejected wastes, which may be a full or partial shipment of hazardous waste that the treatment, storage, or disposal facility cannot accept, or container residues, which are residues that exceed the quantity limits for "empty" containers set forth in subsections 3, 4, and 5 of section 33.1-24-02-07.
2. For rejected loads and residues (subsections 4, 5, and 6 of section 33.1-24-05-39 or the applicable requirements of subsection 5 of section 33.1-24-06-16), check the appropriate box if the shipment is a rejected load (for example, rejected by the designated or alternate facility, or both, and is sent to an alternate facility or returned to the generator) or a regulated residue that cannot be removed from a container. Enter the reason for the rejection or the inability to remove the residue and a description of the waste. Also, reference the manifest tracking number for any

additional manifests being used to track the rejected waste or residue shipment on the original manifest. Indicate the original manifest tracking number in item 14, the special handling block and additional information block of the additional manifests.

3. Owners or operators of facilities located in unauthorized states (for example, states in which the environmental protection agency administers the hazardous waste management program) who cannot resolve significant differences in quantity or type within fifteen days of receiving the waste must submit to their regional administrator a letter with a copy of the manifest at issue describing the discrepancy and attempts to reconcile it (subsection 3 of section 33.1-24-05-39 and the applicable requirements of subsection 5 of section 33.1-24-06-16).
4. Owners or operators of facilities located in authorized states (for example, those states that have received authorization from the environmental protection agency to administer the hazardous waste management program) should contact their state agency for information on where to report discrepancies involving "significant differences" to state officials.

Item 18b. Alternate facility (or generator) for receipt of full load rejections

Enter the name, address, phone number, and environmental protection agency identification number of the alternate facility which the rejecting treatment, storage, or disposal facility has designated, after consulting with the generator, to receive a fully rejected waste shipment. In the event that a fully rejected shipment is being returned to the generator, the rejecting treatment, storage, or disposal facility may enter the generator's site information in this space. This field is not to be used to forward partially rejected loads or residue waste shipments.

Item 18c. Alternate facility (or generator) signature

The authorized representative of the alternate facility (or the generator in the event of a returned shipment) must sign and date this field of the form to acknowledge receipt of the fully rejected wastes or residues identified by the initial treatment, storage, or disposal facility.

Item 19. Hazardous waste report management method codes

Enter the most appropriate hazardous waste report management method code for each waste listed in item 9. The hazardous waste report management method code is to be entered by the first treatment, storage, or disposal facility that receives the waste and is the code that best describes the way in which the waste is to be managed when received by the treatment, storage, or disposal facility.

Item 20. Designated facility owner or operator certification of receipt (except as noted in item 18a)

Enter the name of the person receiving the waste on behalf of the owner or operator of the facility. That person must acknowledge receipt or rejection of the waste described on the manifest by signing and entering the date of receipt or rejection where indicated. Since the facility certification acknowledges receipt of the waste except as noted in the discrepancy space in item 18a, the certification should be signed for both waste receipt and waste rejection, with the rejection being noted and described in the space provided in item 18a. Fully rejected wastes may be forwarded or returned using item 18b after consultation with the generator. Enter the name of the person accepting the waste on behalf of the owner or operator of the alternate facility or the original generator. That person must acknowledge receipt or rejection of the waste described on the manifest by signing and entering the date they received or rejected the waste in item 18c. Partially rejected wastes and residues must be reshipped under a new manifest, to be initiated and signed by the rejecting treatment, storage, or disposal facility as offeror of the shipment.

Manifest continuation sheet

Instructions - continuation sheet, environmental protection agency form 8700-22A

Read all instructions before completing this form. This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used - press down hard.

This form must be used as a continuation sheet to form 8700-22 if:

1. More than two transporters are to be used to transport the waste; or
2. More space is required for the United States department of transportation descriptions and related information in item 9 of environmental protection agency form 8700-22. State and federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use the uniform hazardous waste manifest (environmental protection agency form 8700-22) and, if necessary, this continuation sheet (environmental protection agency form 8700-22A) for both interstate and intrastate transportation.

Item 21. Generator's identification number

Enter the generator's environmental protection agency twelve digit identification number or, the state generator identification number if the generator site does not have an environmental protection agency identification number.

Item 22. Page -

Enter the page number of this continuation sheet.

Item 23. Manifest tracking number

Enter the manifest tracking number from item 4 of the manifest form to which this continuation sheet is attached.

Item 24. Generator's name -

Enter the generator's name as it appears in item 5 on the first page of the manifest.

Item 25. Transporter - company name

If additional transporters are used to transport the waste described on this manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "transporter" the order of the transporter. For example, transporter three company name. Also, enter the environmental protection agency twelve digit identification number of the transporter described in item 25.

Item 26. Transporter - company name

If additional transporters are used to transport the waste described on this manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "transporter" the order of the transporter. For example, transporter four company name. Each continuation sheet can record the names of two additional transporters. Also enter the environmental protection agency twelve digit identification number of the transporter named in item 26.

Item 27. United States department of transportation description including proper shipping name, hazardous class, and identification number (UN/NA)

For each row enter a sequential number under item 27b that corresponds to the order of waste codes from one continuation sheet to the next, to reflect the total number of wastes being shipped. Refer to instructions for item 9 of the manifest for the information to be entered.

Item 28. Containers (number and type)

Refer to the instructions for item 10 of the manifest for information to be entered.

Item 29. Total quantity

Refer to the instructions for item 11 of the manifest form.

Item 30. Units of measure (weight or volume)

Refer to the instructions for item 12 of the manifest form.

Item 31. Waste codes

Refer to the instructions for item 13 of the manifest form.

Item 32. Special handling instructions and additional information

Refer to the instructions for item 14 of the manifest form.

Transporters

Item 33. Transporter - acknowledgment of receipt of materials

Enter the same number of the transporter as identified in item 25. Enter also the name of the person accepting the waste on behalf of the transporter (company name) identified in item 25. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Item 34. Transporter - acknowledgment of receipt of materials

Enter the same number of the transporter as identified in item 26. Enter also the name of the person accepting the waste on behalf of the transporter (company name) identified in item 26. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Owner and operators of treatment, storage, or disposal facilities

Item 35. Discrepancy indication space

Refer to item 18. This space may be used to more fully describe information on discrepancies identified in item 18a of the manifest form.

Item 36. Hazardous waste report management method codes

For each field here, enter the sequential number that corresponds to the waste materials described under item 27, and enter the appropriate process code that describes how the materials will be processed when received. If additional continuation sheets are attached, continue numbering the waste materials and process code fields sequentially, and enter on each sheet the process codes corresponding to the waste materials identified on that sheet.

APPENDIX I
Uniform Hazardous Waste Manifest Form Example - Page 1 of 2

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
		5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)	
Generator's Phone:					
6. Transporter 1 Company Name				U.S. EPA ID Number	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address				U.S. EPA ID Number	
Facility's Phone:					
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity
			No.	Type	12. Unit Wt./Vol.
	1.				
	2.				
	3.				
					13. Waste Codes
14. Special Handling Instructions and Additional Information					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Offeror's Printed/typed Name				Signature	Month Day Year
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
17. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/typed Name				Signature	Month Day Year
Transporter 2 Printed/typed Name				Signature	Month Day Year
18. Discrepancy					
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Referenced Number: _____					
18b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone:					
18c. Signature of Alternate Facility (or Generator)				Month Day Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1.	2.	3.	4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a					
Printed/typed Name				Signature	Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

APPENDIX I (continued)
Hazardous Waste Manifest Form Example - Page 2 of 2

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number	22. Page	23. Manifest Tracking Number				
24. Generator's Name								
25. Transporter _____ Company Name				U.S. EPA ID Number				
26. Transporter _____ Company Name				U.S. EPA ID Number				
GENERATOR	27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes	
			No.	Type				
32. Special Handling Instructions and Additional Information								
TRANSPORTER	33. Transporter _____ Acknowledgment of Receipt of Materials			Signature		Month	Day	Year
	Printed/Typed Name							
DESIGNATED FACILITY	34. Transporter _____ Acknowledgment of Receipt of Materials			Signature		Month	Day	Year
	Printed/Typed Name							
35. Discrepancy								
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								

CHAPTER 33.1-24-04 STANDARDS FOR TRANSPORTERS

Section

- 33.1-24-04-01 Scope
- 33.1-24-04-02 Identification Number and Registration Certificate
- 33.1-24-04-03 Transfer Facility Requirements
- 33.1-24-04-04 The Manifest System
- 33.1-24-04-05 Compliance With the Manifest
- 33.1-24-04-06 Recordkeeping
- 33.1-24-04-07 Immediate Action
- 33.1-24-04-08 Discharge Cleanup

33.1-24-04-01. Scope.

1. This chapter establishes standards which apply to persons transporting hazardous waste within this state if the transportation requires a manifest under chapter 33.1-24-03.
2. This chapter does not apply to onsite transportation of hazardous waste by generators or by owners or by operators of permitted hazardous waste management facilities.
3. A transporter of hazardous waste must also comply with chapter 33.1-24-03 if the transporter:
 - a. Transports hazardous waste into this state from abroad; or
 - b. Mixes hazardous waste of different department of transportation shipping descriptions by placing them into a single container.

[NOTE: The transporter in complying with these requirements does not become the generator of the waste.]

4. A transporter of hazardous waste subject to manifesting requirements of chapter 33.1-24-03, or subject to the requirements of sections 33.1-24-05-700 through 33.1-24-05-799, that is being imported from or exported to any of the countries listed in subdivision a of subsection 1 of section 33.1-24-03-25 for purposes of recovery is subject to sections 33.1-24-04-01 through 33.1-24-04-03 and to all other relevant requirements of sections 33.1-24-03-50 through 33.1-24-03-59, including section 33.1-24-03-54 for movement documents.
5. Persons responding to an explosives or munitions emergency in accordance with subparagraph d of paragraph 1 of subdivision g of subsection 6 of section 33.1-24-05-01 or paragraph 4 of subdivision g of subsection 6 of section 33.1-24-05-01 or 40 CFR 265.1(c)(11)(i)(D) or (iv) as incorporated by reference in subsection 5 of section 33.1-24-06-16, and item 4 of subparagraph a and subparagraph c of paragraph 9 of subdivision b of subsection 2 of section 33.1-24-06-01, are not required to comply with the standards of chapter 33.1-24-03.
6. Section 33.1-24-05-823 identifies how the requirements of this chapter apply to military munitions classified as solid waste under section 33.1-24-05-822.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-02. Identification number and registration certificate.

1. A transporter may not transport hazardous wastes without having received an identification number, a transporter permit, and a registration certificate from the department.

2. A transporter who has not received an identification number and a registration certificate, or a transporter permit, may obtain them by applying to the department. Upon receiving the request, the department will assign an identification number and issue a registration certificate to the transporter.
3. The department may assess and collect reasonable fees for the issuance of registration certificates and transporter permits.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-03. Transfer facility requirements.

A transporter who stores manifested shipments of hazardous waste in containers meeting the requirements of section 33.1-24-03-08 at a transfer facility for a period of ten days or less is not subject to regulation under chapters 33.1-24-05 and 33.1-24-06 with respect to the storage of those wastes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-04. The manifest system.

1. Transporters subject to manifesting requirements.
 - a. Manifest requirement. A transporter may not accept hazardous waste from a generator unless the transporter is also provided with a manifest signed in accordance with the provisions of subsections 1 through 7 of section 33.1-24-03-07, or is provided with an electronic manifest that is obtained, completed, and transmitted in accordance with subdivision b of subsection 1 of section 33.1-24-03-04, and signed with a valid and enforceable electronic signature as described in 40 CFR 262.25.
 - b. Exports. In the case of exports other than those subject to sections 33.1-24-03-50 through 33.1-24-03-59, a transporter may not accept such waste from a primary exporter or other person if the transporter knows the shipment does not conform to the environmental protection agency acknowledgment of consent; and unless, in addition to a manifest signed by the generator as provided in this section, the transporter shall also be provided with an environmental protection agency acknowledgment of consent which, except for shipments by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)). For exports of hazardous waste subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59, a transporter may not accept hazardous waste without a tracking document that includes all information required by section 33.1-24-03-54.
 - c. Compliance date for form revisions. The revised manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-04-04, and 33.1-24-04-05, shall not apply until September 5, 2006 or article 33.1-24 is amended and effective, but not prior to September 5, 2006. The manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-04-04, and 33.1-24-04-05, contained in Article 33.1-24, amended December 1, 2003, shall be applicable until September 5, 2006, or when amended, but not after September 5, 2006.
 - d. Use of electronic manifest. Legal equivalence to paper forms for participating transporters. Electronic manifests that are obtained, completed, and transmitted in accordance with subdivision b of subsection 1 of section 33.1-24-03-04, and used in accordance with this

section in lieu of environmental protection agency forms 8700-22 and 8700-22A, are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these rules to obtain, complete, sign, carry, provide, give, use, or retain a manifest.

(1) Any requirement in these rules to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of 40 CFR 262.25.

(2) Any requirement in these rules to give, provide, send, forward, or return to another person a copy of the manifest is satisfied when a copy of an electronic manifest is transmitted to the other person by submission to the system.

(3) Any requirement in these rules for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an electronic manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the waste shipment, except that to the extent that the hazardous materials regulation on shipping papers for carriage by public highway requires transporters of hazardous materials to carry a paper document to comply with 49 CFR 177.817, a hazardous waste transporter must carry one printed copy of the electronic manifest on the transport vehicle.

(4) Any requirement in these rules for a transporter to keep or retain a copy of a manifest is satisfied by the retention of an electronic manifest in the transporter's account on the e-manifest system, provided that such copies are readily available for viewing and production if requested by any environmental protection agency inspector or authorized department representative.

(5) No transporter may be held liable for the inability to produce an electronic manifest for inspection under this section if that transporter can demonstrate that the inability to produce the electronic manifest is exclusively due to a technical difficulty with the environmental protection agency system for which the transporter bears no responsibility.

e. A transporter may participate in the electronic manifest system either by accessing the electronic manifest system from the transporter's own electronic equipment, or by accessing the electronic manifest system from the equipment provided by a participating generator, by another transporter, or by a designated facility.

f. Special procedures when electronic manifest is not available. If after a manifest has been originated electronically and signed electronically by the initial transporter, and the electronic manifest system should become unavailable for any reason, then:

(1) The transporter in possession of the hazardous waste when the electronic manifest becomes unavailable shall reproduce sufficient copies of the printed manifest that is carried on the transport vehicle pursuant to paragraph 3 of subdivision d, or obtain and complete another paper manifest for this purpose. The transporter shall reproduce sufficient copies to provide the transporter and all subsequent waste handlers with a copy for the transporter and all subsequent waste handler files, plus two additional copies that will be delivered to the designated facility with the hazardous waste.

(2) On each printed copy, the transporter shall include a notation in the special handling and additional description space (item 14) that the paper manifest is a replacement manifest for a manifest originated in the electronic manifest system, shall include (if

not preprinted on the replacement manifest) the manifest tracking number of the electronic manifest that is replaced by the paper manifest, and shall also include a brief explanation why the electronic manifest was not available for completing the tracking of the shipment electronically.

(3) A transporter signing a replacement manifest to acknowledge receipt of the hazardous waste must ensure that each paper copy is individually signed and that a legible handwritten signature appears on each copy.

(4) From the point at which the electronic manifest is no longer available for tracking the waste shipment, the paper replacement manifest copies shall be carried, signed, retained as records, and given to a subsequent transporter or to the designated facility, following the instructions, procedures, and requirements that apply to the use of all other paper manifests.

g. Special procedures for electronic signature methods undergoing tests. If a transporter using an electronic manifest signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the transporter shall sign the electronic manifest electronically and also sign with an ink signature the transporter acknowledgment of receipt of materials on the printed copy of the manifest that is carried on the vehicle in accordance with paragraph 3 of subdivision d. This printed copy bearing the generator's and transporter's ink signatures shall also be presented by the transporter to the designated facility to sign in ink to indicate the receipt of the waste materials or to indicate discrepancies. After the owner or operator of the designated facility has signed this printed manifest copy with the owner or operator's ink signature, the printed manifest copy shall be delivered to the designated facility with the waste materials.

h. Imposition of user fee for electronic manifest use. A transporter who is a user of the electronic manifest may be assessed a user fee by the environmental protection agency for the origination or processing of each electronic manifest. The environmental protection agency shall maintain and update from time-to-time the schedule of electronic manifest user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The schedule of electronic manifest user fees shall be published by the environmental protection agency as an appendix to 40 CFR Part 262.

2. Before transporting the hazardous waste, the transporter must sign and date the manifest acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.

3. The transporter shall ensure that the manifest accompanies the hazardous waste. In the case of exports, the transporter shall ensure that a copy of the environmental protection agency acknowledgment of consent also accompanies the hazardous waste.

4. A transporter who delivers a hazardous waste to another transporter or to the designated facility must:

a. Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest;

b. Retain one copy of the manifest in accordance with section 33.1-24-04-06; and

c. Give remaining copies of the manifest to the accepting transporter or designated facility.

5. The requirements of subsections 3, 4, and 6 do not apply to water (bulk shipment) transporters if:

- a. The hazardous waste is delivered by water (bulk shipment) to the designated facility;
- b. A shipping paper containing all the information required on the manifest (excluding the identification numbers, generator certification, and signatures) and, for exports, and environmental protection agency acknowledgment of consent accompanies the hazardous waste;
- c. The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper;
- d. The person delivering the hazardous waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and
- e. A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with section 33.1-24-04-06.

6. For shipments involving rail transportation, the requirements of subsections 3, 4, and 5 do not apply and the following requirements do apply:

a. When accepting hazardous waste from nonrail transporter, the initial rail transporter must:

- (1) Sign and date the manifest acknowledging acceptance of the hazardous waste;
- (2) Return a signed copy of the manifest to the nonrail transporter;
- (3) Forward at least three copies of the manifest to:
 - (a) The next nonrail transporter, if any; or
 - (b) The designated facility, if the shipment is delivered to that facility by rail; or
 - (c) The last rail transporter designated to handle the waste in the United States; and
- (4) Retain one copy of the manifest and rail shipping paper in accordance with section 33.1-24-04-06;

b. Rail transporters shall ensure that a shipping paper containing all the information required on the manifest (excluding the identification numbers, generator certification, and signatures) and, for exports, an environmental protection agency acknowledgment of consent accompanies the hazardous waste at all times;

[NOTE: Intermediate rail transporters are not required to sign either the manifest or shipping paper.]

c. When delivering hazardous waste to the designated facility, a rail transporter must:

- (1) Obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or shipping paper (if the manifest has not been received by the facility); and
- (2) Retain a copy of the manifest or signed shipping paper in accordance with section 33.1-24-04-06;

d. When delivering hazardous waste to a nonrail transporter, a rail transporter must:

(1) Obtain the date of delivery and the handwritten signature of the next nonrail transporter on the manifest; and

(2) Retain a copy of the manifest in accordance with section 33.1-24-04-06; and

e. Before accepting hazardous waste from a rail transporter, a nonrail transporter must sign and date the manifest and provide a copy to the rail transporter.

7. Transporters who transport hazardous waste out of the United States must:

a. Sign and date the manifest in the international shipment's block to indicate the date that the shipment left the United States;

b. Retain one copy in accordance with subsection 4 of section 33.1-24-04-06;

c. Return a signed copy of the manifest to the generator; and

d. Give a copy of the manifest to a United States customs official at the point of departure from the United States.

8. A transporter transporting hazardous waste from a generator who generates greater than one hundred kilograms but less than one thousand kilograms of hazardous waste in a calendar month need not comply with the requirements of this section or those in section 33.1-24-04-06 provided that:

a. The waste is being transported pursuant to a reclamation agreement as provided in subsection 5 of section 33.1-24-03-04;

b. The transporter records, on a log or shipping paper, the following information for each shipment:

(1) The name, address, and identification number of the generator of the waste;

(2) The quantity of waste accepted;

(3) All department of transportation required shipping information; and

(4) The date the waste is accepted;

c. The transporter carries this record when transporting waste to the reclamation facility; and

d. The transporter retains these records for a period of at least three years after termination or expiration of the agreement.

9. Electronic manifest signatures shall meet the criteria described in 40 CFR 262.25.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-05. Compliance with the manifest.

1. The transporter must deliver the entire quantity of hazardous waste which the transporter has accepted from a generator or a transporter to:

a. The designated facility listed on the manifest;

b. The alternate designated facility, if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery;

c. The next designated transporter; or

d. The place outside the United States designated by the generator.

2. If the hazardous waste cannot be delivered in accordance with subsection 1, because of an emergency condition other than rejection of the waste by the designated facility, then the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

3. If hazardous waste is rejected by the designated facility while the transporter is on the facility's premises, then the transporter must obtain the following:

a. For a partial load rejection or for regulated quantities of container residues, a copy of the original manifest that includes the facility's date and signature, and the manifest tracking number of the new manifest that will accompany the shipment, and a description of the partial rejection or container residue in the discrepancy block of the original manifest. The transporter must retain a copy of this manifest in accordance with section 33.1-24-04-06, and give the remaining copies of the original manifest to the rejecting designated facility. If the transporter is forwarding the rejected part of the shipment or a regulated container residue to an alternate facility or returning it to the generator, the transporter must obtain a new manifest to accompany the shipment, and the new manifest must include all of the information required in subdivisions a through f of subsection 5 or subdivisions a through f of subsection 6 of section 33.1-24-05-39 or the applicable requirements of subsection 5 of section 33.1-24-06-16.

b. For a full load rejection that will be taken back by the transporter, a copy of the original manifest that includes the rejecting facility's signature and date attesting to the rejection, the description of the rejection in the discrepancy block of the manifest, and the name, address, phone number, and identification number for the alternate facility or generator to whom the shipment must be delivered. The transporter must retain a copy of the manifest in accordance with section 33.1-24-04-06, and give a copy of the manifest containing this information to the rejecting designated facility. If the original manifest is not used, then the transporter must obtain a new manifest for the shipment and comply with subdivisions a through f of subsection 5 of section 33.1-24-05-39 or the applicable requirements of subsection 5 of section 33.1-24-06-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-06. Recordkeeping.

1. A transporter of hazardous waste must keep a copy of the manifest signed by the transporter, the generator, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.

2. For shipments delivered to the designated facility by water (bulk shipment), each water (bulk shipment) transporter must retain a copy of the shipping paper containing all of the information required in subdivision b of subsection 5 of section 33.1-24-04-04 for a period of three years from the date the hazardous waste was accepted by the initial transporter.

3. For shipments of hazardous waste by rail within the United States:

- a. The initial rail transporter must keep a copy of the manifest and shipping paper with all the information required in subdivision b of subsection 6 of section 33.1-24-04 for a period of three years from the date the hazardous waste was accepted by the initial transporter; and
- b. The final rail transporter must keep a copy of the signed manifest (or the shipping paper if signed by the designated facility in lieu of the manifest) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

4. A transporter who transports hazardous waste out of the United States must keep a copy of the manifest indicating that the hazardous waste left the United States for a period of three years from the date the hazardous waste was accepted by the initial transporter.

5. The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-07. Immediate action.

1. In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate immediate action to protect human health and the environment, e.g., notify local authorities and dike the discharge area.

2. If a discharge of hazardous waste occurs during transportation and an official of a state or local government or a federal agency, acting within the scope of official responsibilities, determines that immediate removal of the waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have identification numbers and without the preparation of a manifest.

3. An air, rail, highway, or water transporter who has discharged hazardous waste must:

- a. Give notice, if required by 49 CFR 171.15 to the national response center (800-424-8802 or 202-426-2675); and
- b. Report in writing as required by 49 CFR 171.16 to the director, office of hazardous materials regulations, materials transportation bureau, department of transportation, Washington, District of Columbia 20590.

4. A water (bulk shipment) transporter who has discharged hazardous waste must give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-04-08. Discharge cleanup.

A transporter must clean up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the hazardous waste discharge no longer presents a hazard to human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

CHAPTER 33.1-24-05
STANDARDS FOR TREATMENT, STORAGE, AND DISPOSAL FACILITIES AND FOR THE
MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF
HAZARDOUS WASTE MANAGEMENT FACILITIES

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33.1-24-05-01. Purpose, scope, and applicability.

1. The purpose of this chapter is to establish minimum standards which define the acceptable management of hazardous waste.
2. The standards in this chapter apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this chapter or chapter 33.1-24-02.
3. The requirements of this chapter apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an underground injection control program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by chapter 33.1-24-06.
4. The requirements of this chapter apply to the owner or operator of a publicly owned treatment works which treats, stores, or disposes of hazardous waste only to the extent they are included in a hazardous waste permit by rule granted to such a person under chapter 33.1-24-06.
5. The requirements of this chapter apply to recyclable materials used in a manner constituting disposal, hazardous waste burned for energy recovery, recyclable materials utilized for precious metal recovery, and spent lead acid batteries being reclaimed.

6. The requirements of this chapter do not apply to:

- a. The owner or operator of a facility permitted, licensed, or registered by the department to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under section 33.1-24-02-05.
- b. The owner or operator of a facility managing recyclable materials described in subdivisions b, c, and d of subsection 1 of section 33.1-24-02-06 (except to the extent they are referred to in sections 33.1-24-05-600 through 33.1-24-05-689 or sections 33.1-24-05-201 through 33.1-24-05-209, sections 33.1-24-05-230 through 33.1-24-05-249, or sections 33.1-24-05-525 through 33.1-24-05-549).
- c. A generator accumulating waste onsite in compliance with section 33.1-24-03-12.
- d. A farmer disposing of pesticide containers from the farmer's own use in compliance with section 33.1-24-03-40.
- e. The owner or operator of a totally enclosed treatment facility, as defined in section 33.1-24-01-04.
- f. The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in section 33.1-24-01-04, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 high total organic carbon subcategory defined in section 33.1-24-05-280, table treatment standards for hazardous wastes, or reactive (D003) waste, to remove the characteristic before land disposal, the owner or operator must comply with the requirements set out in subsection 2 of section 33.1-24-05-08.
- g. Immediate response activities.
 - (1) Except as provided in paragraph 2, a person engaged in treatment or containment activities during immediate response to any of the following situations:
 - (a) A discharge of hazardous waste.
 - (b) An imminent and substantial threat of a discharge of hazardous waste.
 - (c) A discharge of material which, when discharged, becomes a hazardous waste.
 - (d) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in section 33.1-24-01-04.
 - (2) An owner or operator of a facility otherwise regulated by this chapter shall comply with all applicable requirements of sections 33.1-24-05-15 through 33.1-24-05-36.
 - (3) Any person who is covered by paragraph 1 and continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter and chapters 33.1-24-06 and 33.1-24-07.
 - (4) In the case of an explosives or munitions emergency response, if a federal, state, tribal, or local official acting within the scope of that person's official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or

the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

h. A transporter storing manifested shipments of hazardous waste in containers meeting the requirements of section 33.1-24-03-08 at a transfer facility for a period of ten days or less.

i. The addition of absorbent material to waste in a container (as defined in section 33.1-24-01-04) or the addition of waste to absorbent material in a container provided that these actions occur at the time waste is first placed in a container and subsection 2 of section 33.1-24-05-08 and sections 33.1-24-05-90 and 33.1-24-05-91 are complied with.

j. Universal waste handlers and universal waste transporters (as defined in section 33.1-24-01-04) handling the wastes listed below. These handlers are subject to regulation under sections 33.1-24-05-700 through 33.1-24-05-799, when handling the below listed universal wastes:

(1) Batteries as described in section 33.1-24-05-702;

(2) Pesticides as described in section 33.1-24-05-703;

(3) Mercury containing equipment as described in section 33.1-24-05-704; and

(4) Lamps as described in section 33.1-24-05-705.

7. The requirements of this chapter apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in sections 33.1-24-05-250 through 33.1-24-05-299.

8. Subsection 1 of section 33.1-24-05-09 applies only to facilities subject to regulation under sections 33.1-24-05-89 through 33.1-24-05-190 and sections 33.1-24-05-300 through 33.1-24-05-309.

9. Section 33.1-24-05-825 identifies when the requirements of this chapter apply to the storage of military munitions classified as solid waste under section 33.1-24-05-822. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in article 33.1-24.

10. The requirements of sections 33.1-24-05-02 through 33.1-24-05-36 and section 33.1-24-05-58 do not apply to remediation waste management sites. (However, some remediation waste management sites may be a part of a facility that is subject to a traditional hazardous waste permit because the facility is also treating, storing, or disposing of hazardous wastes that are not remediation wastes. In these cases, sections 33.1-24-05-02 through 33.1-24-05-36 and section 33.1-24-05-58 do apply to the facility subject to the traditional hazardous waste permit.) Instead of the requirements of sections 33.1-24-05-02 through 33.1-24-05-36, owners or operators of remediation waste management sites must:

a. Obtain an identification number by applying to the department using environmental protection agency form 8700-12, or equivalent state form;

b. Obtain a detailed chemical and physical analysis of a representative sample of the hazardous remediation wastes to be managed at the site. At a minimum, the analysis must contain all of the information which must be known to treat, store, or dispose of the waste according to chapter 33.1-24-05, and must be kept accurate and up to date;

- c. Prevent people who are unaware of the danger from entering, and minimize the possibility for unauthorized people or livestock to enter onto the active portion of the remediation waste management site, unless the owner or operator can demonstrate to the department that:
- (1) Physical contact with the waste, structures, or equipment within the active portion of the remediation waste management site will not injure people or livestock who may enter the active portion of the remediation waste management site; and
 - (2) Disturbance of the waste or equipment by people or livestock who enter onto the active portion of the remediation waste management site will not cause a violation of the requirements of this article;
- d. Inspect the remediation waste management site for malfunctions, deterioration, operator errors, and discharges that may be causing, or may lead to, a release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment, and must remedy the problem before it leads to a human health or environmental hazard. If a hazard is imminent or has already occurred, the owner or operator must take remedial action immediately;
- e. Provide personnel with classroom or on-the-job training on how to perform their duties in a way that ensures the remediation waste management site complies with the requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 3-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, and on how to respond effectively to emergencies;
- f. Take precautions to prevent accidental ignition or reaction of ignitable or reactive waste, and prevent threats to human health and the environment from ignitable, reactive, and incompatible waste;
- g. For remediation waste management sites subject to regulation under sections 33.1-24-05-89 through 33.1-24-05-190 and sections 33.1-24-05-300 through 33.1-24-05-309, the owner or operator must design, construct, operate, and maintain a unit within a one hundred-year floodplain to prevent washout of any hazardous waste by a one hundred-year flood, unless the owner or operator can meet the demonstration of subsection 1 of section 33.1-24-05-09;
- h. Not place any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, or underground mine or cave;
- i. Develop and maintain a construction quality assurance program for all surface impoundments, waste piles, and landfill units that are required to comply with subsections 3 and 4 of section 33.1-24-05-119, subsections 2 and 3 of section 33.1-24-05-131, and subsections 3 and 4 of section 33.1-24-05-177 at the remediation waste management site, according to the requirements of section 33.1-24-05-10;
- j. Develop and maintain procedures to prevent accidents and a contingency and emergency plan to control accidents that occur. These procedures must address proper design, construction, maintenance, and operation of remediation waste management units at the site. The goal of the plan must be to minimize the possibility of, and the hazards from a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment. The plan must explain specifically how to treat, store, and dispose of the hazardous remediation waste in question, and must be implemented immediately

whenever a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment;

- k. Designate at least one employee, either on the facility premises or on call (that is, available to respond to an emergency by reaching the facility quickly), to coordinate all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan;
- l. Develop, maintain, and implement a plan to meet the requirements in subdivisions b through f, i, and j; and
- m. Maintain records documenting compliance with subdivisions a through l.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-02. Identification number and permit.

Every facility owner or operator shall apply to the department for an identification number and a permit. The department may assess and collect reasonable fees for the review and issuance of permits.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-09; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-09; S.L. 2017, ch. 199, § 19

33.1-24-05-03. Required notices.

1. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source shall notify the department and the environmental protection agency in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required. The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to sections 33.1-24-03-50 through 33.1-24-03-59 must provide a copy of the movement document bearing all required signatures to the foreign exporter; to the office of enforcement and compliance assurance, office of federal activities, international compliance assurance division (2254A), environmental protection agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460; the state; and to the competent authorities of all other countries concerned within three working days of receipt of the shipment. The original of the signed movement document must be maintained at the facility for at least three years. In addition, such owner or operator shall, as soon as possible, but no later than thirty days after the completion of recovery and no later than one calendar year following the receipt of the hazardous waste, send a certificate of recovery to the foreign exporter; to the competent authority of the country of export; to the environmental protection agency's office of enforcement and compliance assurance at the above address, and the state, by mail, email without a digital signature followed by mail, or fax followed by mail.
2. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the postclosure care period, the owner or operator shall notify the new owner or operator in writing of the requirements in this chapter and chapter 33.1-24-06.

3. The owner or operator of a facility that receives hazardous waste from an offsite source (except where the owner or operator is also the generator) shall inform the generator in writing that the owner or operator has the appropriate permit for, and will accept, the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-04. General waste analysis.

1. Waste analysis requirements.

- a. Before an owner or operator treats, stores, or disposes of any hazardous wastes, the owner or operator shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this chapter or a permit issued under chapter 33.1-24-06.
- b. The analysis may include data developed under chapter 33.1-24-02 and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes. (Comment: For example, the facility's records of analyses performed on the waste before the effective date of these rules, or studies conducted on hazardous wastes generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with subdivision a. The owner or operator of an offsite facility may arrange for the generator of the hazardous waste to supply part of the information required by subdivision a, except as otherwise specified in subsections 2 and 3 of section 33.1-24-05-256. If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this section.)
- c. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated:
 - (1) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and
 - (2) For offsite facilities when the results of the inspection required in subdivision d indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.
- d. The owner or operator of an offsite facility shall inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

2. The owner or operator shall develop and follow a written waste analysis plan which describes the procedures which the owner or operator will carry out to comply with subsection 1. The owner or operator must keep this plan at the facility. At a minimum, the plan must specify:

- a. The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters, i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection 1.
- b. The test methods which will be used to test for these parameters.

c. The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(1) One of the sampling methods described in appendix I of chapter 33.1-24-02; or

(2) An equivalent sampling method.

d. The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date.

e. For offsite facilities the waste analysis that hazardous waste generators have agreed to supply.

f. Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in sections 33.1-24-05-08, 33.1-24-05-145, 33.1-24-05-183, 33.1-24-05-256, subsection 4 of section 33.1-24-05-404, subsection 4 of section 33.1-24-05-433, and section 33.1-24-05-453.

g. For surface impoundments exempted from land disposal restrictions under subsection 1 of section 33.1-24-05-253, the procedures and schedules for:

(1) The sampling of impoundment contents;

(2) The analyses of test data; and

(3) The annual removal of residues which are not delisted under section 33.1-24-01-08 or which exhibit a characteristic of hazardous waste and either:

(a) Do not meet applicable treatment standards of sections 33.1-24-05-280 through 33.1-24-05-289; or

(b) Where no treatment standards have been established:

[1] Such residues are prohibited from land disposal under section 33.1-24-05-272 or Resource Conservation and Recovery Act section 3004(b); or

[2] Such residues are prohibited from land disposal under subsection 6 of section 33.1-24-05-273.

h. For owners and operators seeking an exemption to the air emission standards of sections 33.1-24-05-450 through 33.1-24-05-474 in accordance with section 33.1-24-05-452:

(1) If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.

(2) If knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from offsite, that is used as the basis for knowledge of the waste.

3. For offsite facilities, the waste analysis plan required in subsection 2 must also specify the procedures which will be used to inspect and analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

- a. The procedures which will be used to determine the identity of each movement of waste managed at the facility.
- b. The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.
- c. The procedures that the owner or operator of an offsite landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-05. Security.

1. The owner or operator shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the owner's or operator's facility, unless the owner or operator can demonstrate to the department that:

- a. Physical contact with the waste, structures, or equipment with the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of the facility.
- b. Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this chapter.

2. Unless exempt under subdivisions a and b of subsection 1, the facility must have:

- a. A twenty-four-hour surveillance system, for example, television monitoring or surveillance by guards or facility personnel, which continuously monitors and controls entry onto the active portion of the facility; or
- b. Both of the following:
 - (1) An artificial or natural barrier, for example, a fence in good repair or a fence combined with a cliff, which completely surrounds the active portion of the facility.
 - (2) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility, for example, an attendant, television monitors, locked entrance, or controlled roadway access to the facility.

3. Unless exempt under subdivisions a and b of subsection 1, a sign with a legend, "Danger - Unauthorized Personnel Keep Out", must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion, and must be legible from a distance of at least twenty-five feet [7.62 meters]. The legend must be written in English and in any other language predominant in the area surrounding the facility. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-06. General inspection requirements.

1. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to release of hazardous waste constituents to the environment, or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.
2. Schedule requirements.
 - a. The owner or operator shall develop and follow a written schedule for inspecting all monitoring equipment, safety, and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
 - b. The owner or operator shall keep this schedule at the facility.
 - c. The schedule must identify the types of problems, for example, malfunctions or deterioration, which are to be looked for during the inspection, for example, inoperative sump pump, leaking fitting, eroding dike, etc.
 - d. The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in sections 33.1-24-05-93, 33.1-24-05-106, 33.1-24-05-108, 33.1-24-05-120, 33.1-24-05-132, 33.1-24-05-150, 33.1-24-05-165, 33.1-24-05-178, 33.1-24-05-302, 33.1-24-05-403, 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-428, and 33.1-24-05-453 through 33.1-24-05-459, where applicable.
3. The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.
4. The owner or operator shall record inspections in an inspection log or summary. The owner or operator shall keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-07. Personnel training.

1. Initial training requirements.
 - a. Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of these rules. The owner or operator shall ensure that this program includes all the elements described in the document required under subdivision c of subsection 4.

b. This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to the positions in which they are employed.

c. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

(1) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment.

(2) Key parameters for automatic waste feed cutoff systems.

(3) Communications or alarm systems.

(4) Response to fires or explosions.

(5) Response to ground water contamination incidents.

(6) Shutdown of operations.

d. For facility employees that receive emergency response training pursuant to occupational safety and health administration regulations 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this section, provided that the overall facility training meets all the requirements of this section.

2. Facility personnel shall successfully complete the program required in subsection 1 within six months after January 1, 1984, or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after January 1, 1984, may not work in unsupervised positions until they have completed the training requirements of subsection 1.

3. Facility personnel shall take part in an annual review of the initial training required in subsection 1.

4. The owner or operator shall maintain the following documents and records at the facility:

a. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.

b. A written job description for each position listed under subdivision a. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications and duties of facility personnel assigned to each position.

c. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under subdivision a.

d. Records that document that the training or job experience required under subsections 1, 2, and 3 has been given to, and completed by, facility personnel.

5. Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-08. General requirements for ignitable, reactive, or incompatible wastes.

1. The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including, but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (for example, from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flames to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive wastes.
2. Where specifically required by other sections of this chapter, the owner or operator of a facility that treats, stores, or disposes ignitable or reactive waste, or mixes incompatible wastes, or incompatible wastes and other materials, must take precautions to prevent reactions which:
 - a. Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - b. Produce uncontrolled toxic mists, fumes, dust, or gases in sufficient quantity to threaten human health or the environment;
 - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - d. Damage the structural integrity of the device or facility; or
 - e. Through other like means threaten human health or the environment.
3. When required to comply with subsection 1 or 2, the owner or operator shall document that compliance. This documentation may be based on references to published scientific or engineering literature data, from trial tests (for example, bench scale or pilot scale tests), waste analysis (as specified in section 33.1-24-05-04), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-09. Location standards.

1. The department will not issue a permit to any facility which is or will be constructed in a location with a geology, hydrogeology, hydrology, or topography which the department reasonably believes is incompatible with the type of hazardous waste management activity occurring or proposed to occur. Locations which are specifically within the meaning of this section include but are not limited to floodplains, ground water recharge areas, highly permeable soils, high ground water tables, and areas of high topographic relief.
2. The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine, or cave is prohibited.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-10. Construction quality assurance program.

1. Construction quality assurance program.

- a. A construction quality assurance program is required for all surface impoundment, waste pile, and landfill units that are required to comply with subsections 3 and 4 of section 33.1-24-05-119, subsections 2 and 3 of section 33.1-24-05-131, and subsections 3 and 4 of section 33.1-24-05-177. The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a construction quality assurance officer who is a registered professional engineer.
- b. The construction quality assurance program must address the following physical components, where applicable:
 - (1) Foundations;
 - (2) Dikes;
 - (3) Low-permeability soil liners;
 - (4) Geomembranes (flexible membrane liners);
 - (5) Leachate collection and removal systems and leak detection systems; and
 - (6) Final cover systems.

2. Written construction quality assurance plan. The owner or operator of units subject to the construction quality assurance program under subsection 1 must develop and implement a written construction quality assurance plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The construction quality assurance plan must include:

- a. Identification of applicable units and a description of how they will be constructed.
- b. Identification of key personnel in the development and implementation of the construction quality assurance plan and construction quality assurance officer qualifications.
- c. A description of inspection and sampling activities for all unit components identified in subdivision b of subsection 1, including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under section 33.1-24-05-40.

3. Contents of program.

- a. The construction quality assurance program must include observations, inspections, tests, and measurements sufficient to ensure:
 - (1) Structural stability and integrity of all components of the unit identified in subdivision b of subsection 1;
 - (2) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit

specifications and good engineering practices, and proper installation of all components (for example, pipes) according to design specifications; and

(3) Conformity of all materials used with design and other material specifications under sections 33.1-24-05-119, 33.1-24-05-131, and 33.1-24-05-177.

b. The construction quality assurance program must include test fills for compacted soil liners, using the same compaction methods as in the full scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of subparagraph b of paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-119, subparagraph b of paragraph 1 of subdivision a of subsection 2 of section 33.1-24-05-131, and subparagraph b of paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-177 in the field. Compliance with the hydraulic conductivity requirements must be verified by using in situ testing on the constructed test fill. The department may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of subparagraph b of paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-119, subparagraph b of paragraph 1 of subdivision a of subsection 2 of section 33.1-24-05-131, and subparagraph b of paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-177 in the field.

4. **Certification.** Waste shall not be received in a unit subject to section 33.1-24-05-10 until the owner or operator has submitted to the department by certified mail or hand delivery a certification signed by the construction quality assurance officer that the approved construction quality assurance plan has been successfully carried out and that the unit meets the requirements of subsection 3 or 4 of section 33.1-24-05-119, subsection 2 or 3 of section 33.1-24-05-131, or subsection 3 or 4 of section 33.1-24-05-177; and the procedure in paragraph 2 of subdivision b of subsection 12 of section 33.1-24-06-04 has been completed. Documentation supporting the construction quality assurance officer's certification must be furnished to the department upon request.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-11. [Reserved]

33.1-24-05-12. [Reserved]

33.1-24-05-13. [Reserved]

33.1-24-05-14. [Reserved]

33.1-24-05-15. Design and operation of facility.

Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-16. Required equipment.

All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

1. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.
2. A device, such as a telephone (immediately available at the scene of operations), or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams.
3. Portable fire extinguishers, fire control equipment, including special extinguishing equipment (such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment.
4. Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-17. Testing and maintenance of equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary, to ensure its proper operation in time of emergency.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-18. Access to communications or alarm system.

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required under section 33.1-24-05-16.
2. If there is ever just one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone, immediately available at the scene of the operation, or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required under section 33.1-24-05-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-19. Required aisle space.

The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-20. Arrangements with local authorities.

1. The owner or operator shall attempt to make the following arrangements, as appropriate for the types of waste handled at the facility and the potential need for the services of these organizations:
 - a. Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.
 - b. Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department and agreements with any others to provide support to the primary emergency authority.
 - c. Agreements with state emergency response teams, emergency response contractors, and equipment suppliers.
 - d. Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
2. Where state or local authorities decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-21. [Reserved]

33.1-24-05-22. [Reserved]

33.1-24-05-23. [Reserved]

33.1-24-05-24. [Reserved]

33.1-24-05-25. [Reserved]

33.1-24-05-26. Purpose and implementation of contingency plan.

1. Each owner or operator shall have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
2. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-27. Content of contingency plan.

1. The contingency plan must describe the actions facility personnel must take to comply with sections 33.1-24-05-26 and 33.1-24-05-31 in response to fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous constituents to air, soil, or surface water at the facility.
2. If the owner or operator has already prepared a spill prevention, control, and countermeasures plan in accordance with 40 CFR part 112, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with these requirements. The owner or operator may develop one contingency plan which meets all regulatory requirements. The department recommends that the plan be based on the national response team's integrated contingency plan guidance ("one plan"). When modifications are made to nonhazardous waste provisions in an integrated contingency plan, the changes do not trigger the need for a hazardous waste permit modification.
3. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to section 33.1-24-05-20.
4. The plan must list names, addresses, and telephone numbers (office and home) of all persons qualified to act as emergency coordinator and this list must be kept up to date. Where more than one is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
5. The plan must include a list of all emergency equipment at the facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment, where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
6. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes, in cases where the primary routes could be blocked by releases of hazardous waste or fires.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-28. Copies of contingency plan.

A copy of the contingency plan and all revisions to the plan must be:

1. Maintained at the facility; and
2. Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-29. Amendment of contingency plan.

The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

1. The facility permit is revised;
2. The plan fails in an emergency;
3. The facility changes in its design, construction, operation, maintenance, or other circumstances, in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. The list of emergency coordinators changes;
5. The list of emergency equipment changes; or
6. Applicable regulations are revised.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-30. Emergency coordinator.

At all times, there must be at least one employee either on the facility premises or on call, i.e., available to respond to an emergency by reaching the facility within a short period of time, with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of wastes handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-31. Emergency procedures.

1. When there is an imminent or actual emergency situation, the emergency coordinator, or the coordinator's designee when the emergency coordinator is on call, shall immediately:
 - a. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel.
 - b. Notify appropriate state or local agencies with designated response roles if their help is needed.
2. When there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
3. Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion, for example, the effects of any toxic irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosions.

4. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the emergency coordinator shall report the coordinator's findings as follows:

a. If the coordinator's assessment indicates that evacuation of local areas may be advisable, the coordinator shall immediately notify appropriate local authorities. The coordinator shall be available to help appropriate officials decide whether local areas should be evacuated.

b. The coordinator shall immediately notify either the government official designated as the on-scene coordinator for that geographical area or the national response center (using their twenty-four-hour toll-free number 800-424-8802). The report must include:

(1) Name and telephone number of reporter.

(2) Name and address of facility.

(3) Time and type of incident, for example, release, fire.

(4) Name and quantity of materials involved, to the extent known.

(5) The extent of injuries, if any.

(6) The possible hazard to human health or the environment, outside the facility.

5. During an emergency, the emergency coordinator shall take all reasonable measures to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

6. If the facility stops operations in response to a fire, an explosion or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

7. Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

8. The emergency coordinator shall ensure that, in the affected areas of the facility:

a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

b. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

9. The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, the owner or operator must submit a written report on the incident to the department. The report must include:

a. Name, address, and telephone number of the owner or operator.

b. Name, address, and telephone number of the facility.

c. Date, time, and type of incident, for example, fire, explosion.

d. Name and quantity of materials involved.

- e. The extent of injuries, if any.
- f. An assessment of actual or potential hazards to human health or the environment, where this is applicable.
- g. Estimated quantity and disposition of recovered material that resulted from the incident.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-32. [Reserved]

33.1-24-05-33. [Reserved]

33.1-24-05-34. [Reserved]

33.1-24-05-35. [Reserved]

33.1-24-05-36. [Reserved]

33.1-24-05-37. Applicability of manifest system, recordkeeping, and reporting requirements.

1. Sections 33.1-24-05-37 through 33.1-24-05-46 apply to owners and operators of both onsite and offsite facilities except as section 33.1-24-05-01 provides otherwise. Sections 33.1-24-05-38, 33.1-24-05-39, and 33.1-24-05-43 do not apply to owners and operators of onsite facilities that do not receive any hazardous waste from offsite sources, and to owners and operators of offsite facilities with respect to waste military munitions exempted from manifest requirements under subsection 1 of section 33.1-24-05-823. Subsection 2 of section 33.1-24-05-40 only applies to permittees who treat, store, or dispose of hazardous waste onsite where such wastes were generated.
2. The revised manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-05-37, 33.1-24-05-38, 33.1-24-05-39, and 33.1-24-05-43, shall not apply until September 5, 2006, or article 33.1-24 is amended and effective, but not prior to September 5, 2006. The manifest form and procedures in sections 33.1-24-01-04, 33.1-24-02-07, 33.1-24-05-37, 33.1-24-05-38, 33.1-24-05-39, and 33.1-24-05-43, contained in article 33.1-24, amended December 1, 2003, shall be applicable until September 5, 2006, or when amended, but not prior to September 5, 2006.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-38. Use of manifest system.

1. If a facility receives:
 - a. Hazardous waste accompanied by a manifest, the owner or operator, or the owner's or operator's agent shall sign and date the manifest as indicated in subdivision b to certify that the hazardous waste covered by the manifest was received, that the hazardous waste was received except as noted in the discrepancy space of the manifest, or that the hazardous waste was rejected as noted in the manifest discrepancy space.
 - b. A hazardous waste shipment accompanied by a manifest, the owner or operator, or the owner's or operator's agent, shall:

(1) Sign and date, by hand, each copy of the manifest;

(2) Note any discrepancies in the manifest, as defined in subsection 1 of section 33.1-24-05-39, on each copy of the manifest;

(3) Immediately give the transporter at least one copy of the signed manifest;

(4) Within thirty days after the delivery, send a copy (page 3) of the manifest to the generator;

(5) Within thirty days of delivery, send the top copy (page 1) of the manifest to the e-manifest system for purposes of data entry and processing. In lieu of mailing this copy to the environmental protection agency, the owner or operator may transmit to the environmental protection agency system an image file of page 1 of the manifest, or both a data string file and the image file corresponding to page 1 of the manifest. Any data or image files transmitted to the environmental protection agency under this paragraph must be submitted in data file and image file formats that are acceptable to the environmental protection agency and that are supported by the environmental protection agency's electronic reporting requirements and by the electronic manifest system; and

(6) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

c. Hazardous waste imported from a foreign source, the receiving facility must mail a copy of the manifest and documentation confirming the environmental protection agency's consent to the import of hazardous waste to the department and to the following address within thirty days of delivery: office of enforcement and compliance assurance, office of federal activities, international compliance assurance division (2254A), environmental protection agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460.

2. If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the identification numbers, generator's certification, and signatures), the owner or operator, or the owner's or operator's agent, shall:

a. Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the shipping paper was received;

b. Note any significant discrepancies (as defined in subsection 1 of section 33.1-24-05-39) in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper;

c. Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received);

d. Within thirty days after the delivery, send a copy of the signed and dated manifest, or a signed and dated copy of the shipping paper (if the manifest has not been received within thirty days after delivery) to the generator; and

e. Retain at the facility a copy of each shipping paper (if signed in lieu of the manifest at the time of delivery) and manifest for at least three years from the date of delivery.

3. If a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of chapter 33.1-24-03.

4. Within three working days of the receipt of a shipment subject to sections 33.1-24-03-50 through 33.1-24-03-59, the owner or operator of the facility must provide a copy of the movement document bearing all required signatures to the exporter, to the office of enforcement and compliance assurance, office of federal activities, international compliance assurance division (2254A), environmental protection agency, 1200 Pennsylvania Avenue, Washington, D.C. 20460, the state, and to competent authorities of all other concerned countries. The original copy of the movement document must be maintained at the facility for at least three years from the date of signature.
5. A facility must determine whether the consignment state for a shipment regulates any additional wastes (beyond those regulated federally) as hazardous wastes under the state's hazardous waste program. Facilities must also determine whether the consignment state or generator state requires the facility to submit any copies of the manifest to these states.
6. Legal equivalence to paper manifests. Electronic manifests that are obtained, completed, and transmitted in accordance with subdivision b of subsection 1 of section 33.1-24-03-04, and used in accordance with this section in lieu of the paper manifest form are the legal equivalent of paper manifest forms bearing handwritten signatures, and satisfy for all purposes any requirement in these rules to obtain, complete, sign, provide, use, or retain a manifest.
 - a. Any requirement in these rules for the owner or operator of a facility to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with or obtaining a valid and enforceable electronic signature within the meaning of 40 CFR 262.25.
 - b. Any requirement in these rules to give, provide, send, forward, or to return to another person a copy of the manifest is satisfied when a copy of an electronic manifest is transmitted to the other person.
 - c. Any requirement in these rules for a manifest to accompany a hazardous waste shipment is satisfied when a copy of an electronic manifest is accessible during transportation and forwarded to the person or persons who are scheduled to receive delivery of the waste shipment.
 - d. Any requirement in these rules for an owner or operator to keep or retain a copy of each manifest is satisfied by the retention of the facility's electronic manifest copies in its account on the e-manifest system, provided that such copies are readily available for viewing and production if requested by any environmental protection agency inspector or authorized department representative.
 - e. No owner or operator may be held liable for the inability to produce an electronic manifest for inspection under this section if the owner or operator can demonstrate that the inability to produce the electronic manifest is due exclusively to a technical difficulty with the electronic manifest system for which the owner or operator bears no responsibility.
7. An owner or operator may participate in the electronic manifest system either by accessing the electronic manifest system from the owner's or operator's electronic equipment, or by accessing the electronic manifest system from portable equipment brought to the owner's or operator's site by the transporter who delivers the waste shipment to the facility.
8. Special procedures applicable to replacement manifests. If a facility receives hazardous waste that is accompanied by a paper replacement manifest for a manifest that was originated electronically, the following procedures apply to the delivery of the hazardous waste by the final transporter:

- a. Upon delivery of the hazardous waste to the designated facility, the owner or operator must sign and date each copy of the paper replacement manifest by hand in item 20 (designated facility certification of receipt) and note any discrepancies in item 18 (discrepancy indication space) of the paper replacement manifest;
- b. The owner or operator of the facility must give back to the final transporter one copy of the paper replacement manifest;
- c. Within thirty days of delivery of the waste to the designated facility, the owner or operator of the facility must send one signed and dated copy of the paper replacement manifest to the generator, and send an additional signed and dated copy of the paper replacement manifest to the electronic manifest system; and
- d. The owner or operator of the facility must retain at the facility one copy of the paper replacement manifest for at least three years from the date of delivery.

9. Special procedures applicable to electronic signature methods undergoing tests. If an owner or operator using an electronic manifest signs this manifest electronically using an electronic signature method which is undergoing pilot or demonstration tests aimed at demonstrating the practicality or legal dependability of the signature method, then the owner or operator shall also sign with an ink signature the facility's certification of receipt or discrepancies on the printed copy of the manifest provided by the transporter. Upon executing its ink signature on this printed copy, the owner or operator shall retain this original copy among its records for at least three years from the date of delivery of the waste.

10. Imposition of user fee for electronic manifest use. An owner or operator who is a user of the electronic manifest format may be assessed a user fee by the environmental protection agency for the origination or processing of each electronic manifest. An owner or operator may also be assessed a user fee by the environmental protection agency for the collection and processing of paper manifest copies that owners or operators must submit to the electronic manifest system operator under paragraph 5 of subdivision b of subsection 1. The environmental protection agency shall maintain and update from time-to-time the schedule of electronic manifest system user fees, which shall be determined based on current and projected system costs and level of use of the electronic manifest system. The schedule of electronic manifest user fees shall be published by the environmental protection agency as an appendix to 40 CFR 262.

11. Electronic manifest signatures. Electronic manifest signatures shall meet the criteria described in 40 CFR 262.25.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-39. Manifest discrepancies.

1. Manifest discrepancies are:

- a. Significant differences (as defined by subsection 2) between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives;
- b. Rejected wastes, which may be a full or partial shipment of hazardous waste that the treatment, storage, or disposal facility cannot accept; or
- c. Container residues, which are residues that exceed the quantity limits for empty containers set forth in subsections 3, 4, and 5 of section 33.1-24-02-07.

2. Significant differences in quantity are: For bulk waste, variations greater than ten percent in weight; for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant differences in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

3. Upon discovering a significant difference in quantity or type, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (for example, with telephone conversations). If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator must immediately submit to the department a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

4. Rejected wastes or container residue.

a. Upon rejecting waste or identifying a container residue that exceeds the quantity limits for empty containers set forth in subsections 3, 4, and 5 of section 33.1-24-02-07, the facility must consult with the generator prior to forwarding the waste to another facility that can manage the waste. If it is impossible to locate an alternative facility that can receive the waste, the facility may return the rejected waste or residue to the generator. The facility must send the waste to the alternative facility or to the generator within sixty days of the rejection or the container residue identification.

b. While the facility is making arrangements for forwarding rejected wastes or residues to another facility under this section, the facility must ensure that either the delivering transporter retains custody of the waste, or the facility must provide for secure, temporary custody of the waste, pending delivery of the waste to the first transporter designated on the manifest prepared under subsection 5 or 6.

5. Except as provided in subdivision g, for full or partial load rejections and residues that are to be sent offsite to an alternate facility, the facility is required to prepare a new manifest in accordance with subsection 1 of section 33.1-24-03-04 and the following instructions:

a. Write the generator's identification number in item 1 of the new manifest. Write the generator's name and mailing address in item 5 of the new manifest. If the mailing address is different from the generator's site address, then write the generator's site address in the designated space for item 5.

b. Write the name of the alternate designated facility and the facility's identification number in the designated facility block (item 8) of the new manifest.

c. Copy the manifest tracking number found in item 4 of the old manifest to the special handling and additional information block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.

d. Copy the manifest tracking number found in item 4 of the new manifest to the manifest reference number line in the discrepancy block of the old manifest (item 18a).

e. Write the department of transportation description for the rejected load or the residue in item 9 (United States department of transportation description) of the new manifest and write the container types, quantity, and volume or volumes of waste.

f. Sign the generator's or offeror's certification to certify, as the offeror of the shipment, that the waste has been properly packaged, marked and labeled, and is in proper condition for

transportation, and mail a signed copy of the manifest to the generator identified in item 5 of the new manifest.

g. For full load rejections that are made while the transporter remains present at the facility, the facility may forward the rejected shipment to the alternate facility by completing item 18b of the original manifest and supplying the information on the next destination facility in the alternate facility space. The facility must retain a copy of this manifest for the facility's records, and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility must use a new manifest and comply with subdivisions a through f.

6. Except as provided in subdivision g, for rejected wastes and residues that must be sent back to the generator, the facility is required to prepare a new manifest in accordance with subsection 1 of section 33.1-24-03-04 and the following instructions:

a. Write the facility's identification number in item 1 of the new manifest. Write the facility's name and mailing address in item 5 of the new manifest. If the mailing address is different from the facility's site address, then write the facility's site address in the designated space for item 5 of the new manifest.

b. Write the name of the initial generator and the generator's identification number in the designated facility block (item 8) of the new manifest.

c. Copy the manifest tracking number found in item 4 of the old manifest to the special handling and additional information block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.

d. Copy the manifest tracking number found in item 4 of the new manifest to the manifest reference number line in the discrepancy block of the old manifest (item 18a).

e. Write the department of transportation description for the rejected load or the residue in item 9 (United States department of transportation description) of the new manifest and write the container types, quantity, and volume or volumes of waste.

f. Sign the generator's or offeror's certification to certify, as offeror of the shipment, that the waste has been properly packaged, marked and labeled, and is in proper condition for transportation.

g. For full load rejections that are made while the transporter remains at the facility, the facility may return the shipment to the generator with the original manifest by completing items 18a and 18b of the manifest and supplying the generator's information in the alternate facility space. The facility must retain a copy for the facility's records and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility must use a new manifest and comply with subdivisions a through f and h.

h. For full or partial load rejections and container residues contained in nonempty containers that are returned to the generator, the facility must also comply with the exception reporting requirements in subsections 1 and 2 of section 33.1-24-03-15.

7. If a facility rejects a waste or identifies a container residue that exceeds the quantity limits for empty containers set forth in subsections 3, 4, and 5 of section 33.1-24-02-07 after the facility has signed, dated, and returned a copy of the manifest to the delivering transporter or to the generator, the facility must amend its copy of the manifest to indicate the rejected wastes or residues in the discrepancy space of the amended manifest. The facility must also copy the

manifest tracking number from item 4 of the new manifest to the discrepancy space of the amended manifest, and must re-sign and date the manifest to certify to the information as amended. The facility must retain the amended manifest for at least three years from the date of amendment, and must within thirty days, send a copy of the amended manifest to the transporter and generator that received copies prior to the manifest being amended.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-40. Operating record.

1. The owner or operator shall keep a written operating record at the facility.
2. The following information must be recorded, as it becomes available, and maintained in the operating record for three years unless noted as follows:
 - a. A description and the quantity of each hazardous waste received and the methods and dates of its treatment, storage, or disposal at the facility as required by appendix I. This information must be maintained in the operating record until closure of the facility.
 - b. The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram that shows each cell or disposal area. For all facilities, this information must include cross-references to manifest document numbers if the waste was accompanied by a manifest. This information must be maintained in the operating record until closure of the facility.
 - c. Records and results of waste analysis and waste determinations performed as specified in sections 33.1-24-05-04, 33.1-24-05-08, 33.1-24-05-145, 33.1-24-05-183, subsection 1 of section 33.1-24-05-253, sections 33.1-24-05-256, 33.1-24-05-404, 33.1-24-05-433, and 33.1-24-05-453.
 - d. Summary reports and details of all incidents that require implementing the contingency plan as specified in subsection 10 of section 33.1-24-05-31.
 - e. Records and results of inspections as required by subsection 4 of section 33.1-24-05-06 (except these data need to be kept only three years).
 - f. Monitoring, testing, or analytical data, and corrective action where required by sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-10, 33.1-24-05-104, 33.1-24-05-106, 33.1-24-05-108, 33.1-24-05-120, 33.1-24-05-126, 33.1-24-05-127, 33.1-24-05-132, 33.1-24-05-137, 33.1-24-05-138, 33.1-24-05-164, 33.1-24-05-165, 33.1-24-05-167, 33.1-24-05-178, 33.1-24-05-179, 33.1-24-05-187, 33.1-24-05-188, 33.1-24-05-302, subsections 3 through 6 of section 33.1-24-05-404, section 33.1-24-05-405, subsections 4 through 9 of section 33.1-24-05-433, section 33.1-24-05-434, and sections 33.1-24-05-452 through 33.1-24-05-460. Maintain in the operating record for three years, except for records and results pertaining to ground water monitoring and cleanup which must be maintained in the operating record until closure of the facility.
 - g. For offsite facilities, notices to generators as specified in subsection 2 of section 33.1-24-05-03.
 - h. All closure cost estimates under subsection 1 of section 33.1-24-05-76 and for disposal facilities, all postclosure cost estimates under subsection 2 of section 33.1-24-05-76. This information must be maintained in the operating record until closure of the facility.

- i. A certification by the permittee no less often than annually that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that is generated to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.
- j. Records of the quantities and date of placement for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to section 33.1-24-05-254, a petition pursuant to section 33.1-24-05-255, and the applicable notice required by a generator under subsection 1 of section 33.1-24-05-256. This information must be maintained in the operating record until closure of the facility.
- k. For an offsite treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256.
- l. For an onsite treatment facility, the information contained in the notice except the manifest number, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256.
- m. For an offsite land disposal facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator of a treatment facility under section 33.1-24-05-256.
- n. For an onsite land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under section 33.1-24-05-256.
- o. For an offsite storage facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256.
- p. For an onsite storage facility, the information contained in the notice except the manifest number, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256.
- q. Any records required under subdivision m of subsection 10 of section 33.1-24-05-01.
- r. Monitoring, testing, or analytical data where required by section 33.1-24-05-150 must be maintained in the operating record for five years.
- s. Certifications as required by subsection 6 of section 33.1-24-05-109 must be maintained in the operating record until closure of the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-41. Availability, retention, and disposition of records.

- 1. All records, including plans, required under this chapter must be furnished upon request, and made available at all reasonable times for inspection, by a duly designated officer, employee, or representative of the department.

2. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the department.
3. A copy of records of waste disposal locations and quantities under subdivision b of subsection 2 of section 33.1-24-05-40 must be submitted to the department and local land authority upon closure of the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-42. Biennial report.

The owner or operator shall prepare and submit a single copy of a biennial report to the department by March first of each even-numbered year. The report form and instructions can be obtained from the department's division of waste management. The biennial report must cover facility activities during the previous calendar year and must include the following information:

1. The identification number, name, and address of the facility.
2. The calendar year covered by the report.
3. For offsite facilities, identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator.
4. A description and quantity of each hazardous waste the facility received during the year. For offsite facilities, this information must be listed by identification number of each generator.
5. The method of treatment, storage, or disposal for each hazardous waste.
6. Any ground water monitoring data which the owner or operator is required to collect under section 33.1-24-05-55, 33.1-24-05-56, or 33.1-24-05-57, and which the owner or operator has not otherwise submitted to the department under those sections.
7. The most recent closure and postclosure cost estimate under section 33.1-24-05-76.
8. For generators who treat, store, or dispose of hazardous waste onsite, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
9. For generators who treat, store, or dispose of hazardous waste onsite, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.
10. The certification signed by the owner or operator of the facility or the owner's or operator's authorized representative.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-43. Unmanifested waste report.

1. If a facility accepts for treatment, storage, or disposal any hazardous waste from an offsite source without an accompanying manifest, or without an accompanying shipping paper as described in subsection 5 of section 33.1-24-04-04 and if the waste is not excluded from the manifest requirement by this article, then the owner or operator shall prepare and submit a

single copy of a report to the department within fifteen days after receiving the waste. The report must be designated "Unmanifested Waste Report" and must include the following information:

- a. The identification number, name, and address of the facility;
- b. The date the facility received the waste;
- c. The identification number, name, and address of the generator and the transporter, if available;
- d. A description and the quantity of each unmanifested hazardous waste the facility received;
- e. The method of treatment, storage, or disposal for each hazardous waste;
- f. The certification signed by the owner or operator of the facility or the owner's or operator's authorized representative; and
- g. A brief explanation of why the waste was unmanifested, if known.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-44. Additional reports.

In addition to submitting the biennial reports and unmanifested waste reports described in sections 33.1-24-05-42 and 33.1-24-05-43, the owner or operator shall also report to the department:

1. Releases, fires, and explosions as specified in subsection 10 of section 33.1-24-05-31.
2. Facility closures specified in section 33.1-24-05-64.
3. As otherwise required by sections 33.1-24-05-47 through 33.1-24-05-58, 33.1-24-05-118 through 33.1-24-05-143, 33.1-24-05-160 through 33.1-24-05-190, and 33.1-24-05-400 through 33.1-24-05-474.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-45. [Reserved]

33.1-24-05-46. [Reserved]

33.1-24-05-47. Applicability of releases from solid waste management units requirements.

1. Applicability.
 - a. Except as provided in subsection 2, sections 33.1-24-05-47 through 33.1-24-05-58 apply to owners or operators of facilities that treat, store, or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in subdivision b for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.
 - b. All solid waste management units must comply with the requirements in section 33.1-24-05-58. A surface impoundment, waste pile, and land treatment unit, or landfill that receives hazardous waste after July 26, 1982, (hereinafter referred to as a "regulated unit") must

comply with the requirements of sections 33.1-24-05-48 through 33.1-24-05-57 in lieu of section 33.1-24-05-58 for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer. The financial responsibility requirements of section 33.1-24-05-58 apply to regulated units.

2. The owner's or operator's regulated unit or units, are not subject to regulation for releases into the uppermost aquifer under sections 33.1-24-05-47 through 33.1-24-05-58 if:

a. The owner or operator is exempted under section 33.1-24-05-01; or

b. The owner or operator operates a unit which the department finds:

(1) Is an engineered structure;

(2) Does not receive or contain liquid waste or waste containing free liquids;

(3) Is designed and operated to exclude liquid, precipitation, and other run-on and runoff;

(4) Has both inner and outer layers of containment enclosing the waste;

(5) Has a leak detection system built into each containment layer;

(6) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and postclosure care periods; and

(7) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the postclosure care period.

c. The department finds, pursuant to subsection 4 of section 33.1-24-05-167, that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of section 33.1-24-05-165 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this subsection can only relieve an owner or operator of responsibility to meet the requirements of sections 33.1-24-05-47 through 33.1-24-05-58 during the postclosure care period;

d. The department finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the postclosure care period specified under section 33.1-24-05-66. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made under this subsection on assumptions that maximize the rate of liquid migration; or

e. The owner or operator designs and operates a pile in compliance with subsection 3 of section 33.1-24-05-130.

3. The requirements of sections 33.1-24-05-47 through 33.1-24-05-58 apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the requirements of sections 33.1-24-05-47 through 33.1-24-05-58:

a. Do not apply if all waste, waste residues, contaminated containment system components, and contaminated soils are removed or decontaminated at closure;

- b. Apply during the postclosure care period under section 33.1-24-05-66 if the owner or operator is conducting a detection monitoring program under section 33.1-24-05-55; or
 - c. Apply during the compliance period under section 33.1-24-05-53 if the owner or operator is conducting a compliance monitoring program under section 33.1-24-05-56 or a corrective action program under section 33.1-24-05-57.
4. Sections 33.1-24-05-47 through 33.1-24-05-58 may apply to miscellaneous units when necessary to comply with sections 33.1-24-05-301 through 33.1-24-05-303.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-48. Required programs.

1. Owners and operators subject to the ground water protection requirements of sections 33.1-24-05-47 through 33.1-24-05-58 shall conduct a monitoring and response program as follows:
 - a. Whenever hazardous constituents under section 33.1-24-05-50 from a regulated unit are detected at a compliance point under section 33.1-24-05-52, the owner or operator must institute a compliance monitoring program under section 33.1-24-05-56. Detected is defined as statistically significant evidence of contamination as described in subsection 6 of section 33.1-24-05-55;
 - b. Whenever the ground water protection standard under section 33.1-24-05-49 is exceeded, the owner or operator must institute a corrective action program under section 33.1-24-05-57. Exceeded is defined as statistically significant evidence of increased contamination as described in subsection 4 of section 33.1-24-05-56;
 - c. Whenever hazardous constituents under section 33.1-24-05-50 from a regulated unit exceed concentration limits under section 33.1-24-05-51 in ground water between the compliance point under section 33.1-24-05-52 and the downgradient facility boundary property, the owner or operator shall institute a corrective action program under section 33.1-24-05-57; or
 - d. In all other cases, the owner or operator shall institute a detection monitoring program under section 33.1-24-05-55.
2. The department will specify in the facility permit the specific elements of the monitoring and response program. The department may include one or more of the programs identified in subsection 1 in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the department will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-49. Ground water protection standard.

The owner or operator must comply with conditions specified in the facility permit designed to ensure that hazardous constituents under section 33.1-24-05-50 detected in the ground water from a regulated

unit do not exceed the concentration limits under section 33.1-24-05-51 in the uppermost aquifer underlying the waste management area beyond the point of compliance under section 33.1-24-05-52 during the compliance period under section 33.1-24-05-53. The department will establish this ground water protection standard in the facility permit when hazardous constituents have been detected in the ground water.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-50. Hazardous constituents.

1. The department will specify in the facility permit the hazardous constituents to which the ground water protection standard of section 33.1-24-05-49 applies. Hazardous constituents are constituents identified in appendix V of chapter 33.1-24-02 that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the department has excluded them under subsection 2.
2. The department will exclude an appendix V of chapter 33.1-24-02 constituent from the list of hazardous constituents specified in the facility permit if the department finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the department will consider the following:
 - a. Potential adverse effects on ground water quality, considering:
 - (1) The physical and chemical characteristics of the waste in the regulated units, including its potential for migration.
 - (2) The hydrogeological characteristics of the facility and surrounding land.
 - (3) The quantity of ground water and the direction of ground water flow.
 - (4) The proximity and withdrawal rates of ground water users.
 - (5) The current and future uses of ground water in the area.
 - (6) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality.
 - (7) The potential for health risks caused by human exposure to waste constituents.
 - (8) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
 - (9) The persistence and permanence of the potential adverse effect.
 - b. Potential adverse effects on hydraulically connected surface water quality, considering:
 - (1) The volume and physical and chemical characteristics of the waste in the regulated unit.
 - (2) The hydrogeological characteristics of the facility and surrounding land.
 - (3) The quantity and quality of ground water, and the direction of ground water flow.

- (4) The patterns of rainfall in the region.
 - (5) The proximity of the regulated unit to surface water.
 - (6) The current and future uses of surface water in the area and any water quality standards established for those surface waters.
 - (7) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.
 - (8) The potential for health risks caused by human exposure to waste constituents.
 - (9) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
 - (10) The persistence and permanence of the potential adverse effects.
3. In making any determination under subsection 2 about the use of ground water in the area around the facility, the department will consider any identification of underground sources of drinking water and exempted aquifers made under provisions of the Safe Drinking Water Act and 40 CFR 144.8.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-51. Concentration limits.

- 1. The department will specify in the facility permit concentration limits in the ground water for hazardous constituents established under section 33.1-24-05-50. The concentration of a hazardous constituent:
 - a. May not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit;
 - b. For any of the constituents listed in table 1, may not exceed the respective value given in that table if the background level of the constituent is below the value given in table 1; or
 - c. May not exceed an alternate limit established by the department under subsection 2.

Table 1. Maximum Concentration of Constituents for Ground Water Protection

<u>Constituent</u>	<u>Maximum Concentration mg/l</u>
<u>Arsenic</u>	<u>0.05</u>
<u>Barium</u>	<u>1.0</u>
<u>Cadmium</u>	<u>0.01</u>
<u>Chromium</u>	<u>0.05</u>
<u>Lead</u>	<u>0.05</u>
<u>Mercury</u>	<u>0.002</u>
<u>Selenium</u>	<u>0.01</u>
<u>Silver</u>	<u>0.05</u>

<u>Endrin (1,2,3,4,10, 10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahydro-1,4-endo, endo-5, 8-dimethano naphthalene)</u>	<u>0.0002</u>
<u>Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)</u>	<u>0.004</u>
<u>Methoxychlor (1,1,1-trichloro-2, 2-bis[p-methoxyphenyl] ethane)</u>	<u>0.1</u>
<u>Toxaphene (C₁₀H₁₀Cl₈ technical chlorinated camphene, 67-69% chlorine)</u>	<u>0.005</u>
<u>2,4-D (2,4-dichlorophenoxyacetic acid)</u>	<u>0.1</u>
<u>2,4,5-TP silvex (2,4,5-trichlorophen-oxy propionic acid)</u>	<u>0.01</u>

2. The department will establish an alternate concentration limit for a hazardous constituent if the department finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the department will consider the following factors:

a. Potential adverse effects on ground water quality, considering:

- (1) The physical and chemical characteristics of the waste in the regulated unit, including the potential for migration.
- (2) The hydrogeological characteristics of the facility and surrounding land.
- (3) The quantity of ground water and direction of ground water flow.
- (4) The proximity and withdrawal rates of ground water users.
- (5) Current and future uses of ground water in the area.
- (6) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality.
- (7) The potential for health risks caused by human exposure to waste constituents.
- (8) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
- (9) The persistence and permanence of potential adverse effects.

b. Potential adverse effects on hydraulically connected surface water quality, considering:

- (1) The volume and physical and chemical characteristics of the waste in the regulated unit.
- (2) The hydrogeological characteristics of the facility and surrounding land.
- (3) The quantity and quality of ground water, and the direction of ground water flow.
- (4) The patterns of rainfall in the region.
- (5) The proximity of the regulated unit to surface waters.
- (6) The current and future uses of surface waters in the area and any water quality standards established for those surface waters.
- (7) Existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality.

(8) The potential for health risks caused by human exposure to waste constituents.

(9) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(10) The persistence and permanence of the potential adverse effects.

3. In making any determination under subsection 2 about the use of ground water in the area around the facility the department will consider any identification of underground sources of drinking water and exempted aquifers made under provisions of the Safe Drinking Water Act and 40 CFR 144.8.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-52. Point of compliance.

1. The department will specify in the facility permit the point of compliance at which the ground water protection standard of section 33.1-24-05-49 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

2. The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

a. The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

b. If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-53. Compliance period.

1. The department will specify in the facility permit the compliance period during which the ground water protection standard of section 33.1-24-05-49 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period).

2. The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of section 33.1-24-05-56.

3. If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in subsection 1, the compliance period is extended until the owner or operator can demonstrate that the ground water protection standard of section 33.1-24-05-49 has not been exceeded for a period of three consecutive years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-54. General ground water monitoring requirements.

The owner or operator shall comply with the following requirements for any ground water monitoring program developed to satisfy section 33.1-24-05-55, 33.1-24-05-56, or 33.1-24-05-57:

1. The ground water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depth to yield ground water samples from the uppermost aquifer that:
 - a. Represent the quality of background ground water that has not been affected by leakage from a regulated unit. A determination of background ground water quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:
 - (1) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and
 - (2) Sampling at other wells will provide an indication of background ground water quality that is representative or more representative than that provided by the upgradient wells.
 - b. Represent the quality of ground water passing the point of compliance.
 - c. Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.
2. If a facility contains more than one regulated unit, separate ground water monitoring systems are not required for each regulated unit provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.
3. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well borehole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space, i.e., the space between the borehole and well casing, above the sampling depth must be sealed to prevent contamination of samples and the ground water.
4. The ground water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground water quality below the waste management area. At a minimum, the program must include procedures and techniques for:
 - a. Sample collection.
 - b. Sample preservation and shipment.
 - c. Analytical procedures.
 - d. Chain of custody control.
5. The ground water monitoring program must include sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples.
6. The ground water monitoring program must include a determination of the ground water surface elevation each time ground water is sampled.

7. In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance points the number and kinds of samples collected to establish background must be appropriate for the form of statistical test employed following generally accepted statistical principles. The sample site must be as large as necessary to ensure with reasonable confidence that a contaminant released to ground water from a facility will be detected. The owner or operator will determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which must be specified in the unit permit upon approval by the department. This sampling procedure must be:

a. A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifers effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants; or

b. An alternate sampling procedure proposed by the owner or operator and approved by the department.

8. The owner or operator will specify one of the following statistical methods to be used in evaluating ground water monitoring data for each hazardous constituent which, upon approval by the department, will be specified in the unit permit. The statistical test chosen must be conducted separately for each hazardous constituent in each well. Where practical quantification limits are used in any of the following statistical procedures to comply with subdivision e of subsection 9, the practical quantification limits must be proposed by the owner or operator and approved by the department. Use of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in subsection 9.

a. A parametric analysis of variance followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance wells mean and the background mean levels for each constituent.

b. An analysis of variance based on ranks followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance wells median and the background median levels for each constituent.

c. A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

d. A control chart approach that gives control limits for each constituent.

e. Another statistical test method submitted by the owner or operator and approved by the department.

9. Any statistical method chosen under subsection 8 for specification in the unit permit shall comply with the following performance standards, as appropriate:

a. The statistical method used to evaluate ground water monitoring data must be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a

distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

- b. If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground water protection standard, the test must be done at a type one error level no less than one hundredth for each testing period. If a multiple comparisons procedure is used, the type one experiment wise error rate for each testing period must be no less than five hundredths; however, the type one error of no less than one hundredth for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.
- c. If a control chart approach is used to evaluate ground water monitoring data, the specific type of control chart and its associated parameter values must be proposed by the owner or operator and approved by the department if the department finds it to be protective of human health and the environment.
- d. If a tolerance interval or a prediction interval is used to evaluate ground water monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, must be proposed by the owner or operator and approved by the department if the department finds these parameters to be protective of human health and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
- e. The statistical method must account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit approved by the department under subsection 8 that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
- f. If necessary, the statistical method must include procedures to control or correct for seasonal and spacial variability as well as temporal correlation in the data.

10. Ground water monitoring data collected in accordance with subsection 7 including actual levels of constituents must be maintained in the facility operating record. The department will specify in the permit when the data must be submitted for review.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-55. Detection monitoring program.

An owner or operator required to establish a detection monitoring program under sections 33.1-24-05-47 through 33.1-24-05-58 shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall monitor for indicator parameters (for example, specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The department will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

- a. The types, quantities, and concentrations of constituents in wastes managed at the regulated unit.
- b. The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area.
- c. The detectability of indicator parameters, waste constituents, and reaction products in ground water.
- d. The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground water background.

2. The owner or operator shall install a ground water monitoring system at the compliance point under section 33.1-24-05-52 which complies with subdivision b of subsection 1, and subsections 2 and 3, of section 33.1-24-05-54.

3. The owner or operator must conduct a ground water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to subsection 1 in accordance with subsection 7 of section 33.1-24-05-54. The owner or operator must maintain a record of ground water analytical data as measured and in a form necessary for the determination of statistical significance under subsection 8 of section 33.1-24-05-54.

4. The department will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit conditions under subsection 1 in accordance with subsection 7 of section 33.1-24-05-54.

5. The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.

6. The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in the permit pursuant to subsection 1 at a frequency specified under subsection 4.

a. In determining whether statistically significant evidence of contamination exists, the owner or operator must use the methods specified in the permit under subsection 8 of section 33.1-24-05-54. These methods must compare data collected at the compliance points to the background ground water quality data.

b. The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well at the compliance point within a reasonable period of time at the completion of sampling. The department will specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and availability of laboratory facilities to perform the analysis of ground water samples.

7. If the owner or operator determines pursuant to subsection 6 that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to subsection 1 at any monitoring well at the compliance point, the owner or operator must:

a. Notify the department of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination.

b. Immediately sample the ground water in all monitoring wells and determine whether constituents in the list of appendix XII of chapter 33.1-24-05 are present, and if so, in what

concentration. However, the department, on a discretionary basis, may allow sampling for a site-specific subset of constituents from the appendix XII of chapter 33.1-24-05 list and other representative or related, or both, waste constituents.

c. For any appendix XII compounds found in the analysis pursuant to subdivision b, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the department and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds in subdivision b, the hazardous constituents found during this initial appendix XII analysis will form the basis for compliance monitoring.

d. Within ninety days, submit to the department an application for a permit modification to establish a compliance monitoring program meeting the requirements of section 33.1-24-05-56. The application must include the following information:

(1) An identification of the concentration of any appendix XII constituent detected in the ground water at each monitoring well at the compliance point.

(2) Any proposed changes to the ground water monitoring system at the facility necessary to meet the requirements of section 33.1-24-05-56.

(3) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of section 33.1-24-05-56.

(4) For each hazardous constituent detected at the compliance point, a proposed concentration limit under subdivision a or b of subsection 1 of section 33.1-24-05-51, or a notice of intent to seek an alternate concentration limit under subsection 2 of section 33.1-24-05-51.

e. Within one hundred eighty days, submit to the department:

(1) All data necessary to justify an alternate concentration limit sought under subsection 2 of section 33.1-24-05-51; and

(2) An engineering feasibility plan for a corrective action program necessary to meet the requirements of section 33.1-24-05-57, unless:

(a) All hazardous constituents identified under subdivision b are listed in table 1 of section 33.1-24-05-51 and their concentrations do not exceed the respective values given in that table; or

(b) The owner or operator has sought an alternate concentration limit under subsection 2 of section 33.1-24-05-51 for every hazardous constituent identified under subdivision b.

f. If the owner or operator determines, pursuant to subsection 6, that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to subsection 1 at any monitoring well at the compliance point, the owner or operator may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner or operator may make a demonstration under this subdivision in addition to, or in lieu of, submitting a permit modification application under subdivision d; however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in

subdivision d unless the demonstration made under this subdivision successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this subdivision, the owner or operator must:

- (1) Notify the department in writing within seven days of determining statistically significant evidence of contamination at the compliance point that the owner or operator intends to make a demonstration under this subdivision;
- (2) Within ninety days, submit a report to the department which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;
- (3) Within ninety days, submit to the department an application for a permit modification to make any appropriate changes to the detection monitoring program facility; and
- (4) Continue to monitor in accordance with the detection monitoring program established under this section.

8. If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, the owner or operator must, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-56. Compliance monitoring program.

An owner or operator who is required to establish a compliance monitoring program under sections 33.1-24-05-47 through 33.1-24-05-58 shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall monitor the ground water to determine whether regulated units are in compliance with the ground water protection standard under section 33.1-24-05-49. The department will specify the ground water protection standard in the facility permit, including:
 - a. A list of the hazardous constituents identified under section 33.1-24-05-50.
 - b. Concentration limits under section 33.1-24-05-51 for each of those hazardous constituents.
 - c. The compliance point under section 33.1-24-05-52.
 - d. The compliance period under section 33.1-24-05-53.
2. The owner or operator shall install a ground water monitoring system at the compliance point as specified under section 33.1-24-05-52. The ground water monitoring system must comply with subdivision b of subsection 1, and subsections 2 and 3, of section 33.1-24-05-54.
3. The department will specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with subsections 7 and 8 of section 33.1-24-05-54.
 - a. The owner or operator must conduct a sampling program for each chemical parameter or hazardous constituent in accordance with subsection 7 of section 33.1-24-05-54.
 - b. The owner or operator must record ground water analytical data as measured and in form necessary for the determination of statistical significance under subsection 8 of section 33.1-24-05-54 for the compliance period of the facility.

4. The owner or operator must determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to subsection 1, at a frequency specified under subsection 6.
 - a. In determining whether statistically significant evidence of increased contamination exists, the owner or operator must use the methods specified in the permit under subsection 8 of section 33.1-24-05-54. The methods must compare data collected at the compliance points to a concentration limit developed in accordance with section 33.1-24-05-51.
 - b. The owner or operator must determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The department will specify that time period and the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground water samples.
5. The owner or operator shall determine the ground water flow rate and direction in the uppermost aquifer at least annually.
6. The department will specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with subsection 7 of section 33.1-24-05-54.
7. Annually, the owner or operator must determine whether additional hazardous constituents from appendix XII, which could possibly be present but are not on the detection monitoring list in the permit, are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in subsection 6 of section 33.1-24-05-55. To accomplish this, the owner or operator must consult with the department to determine on a case-by-case basis: which sample collection event during the year will involve enhanced sampling, the number of monitoring wells at the compliance point to undergo enhanced sampling, the number of samples to be collected from each of these monitoring wells, and the specific constituents from appendix XII for which these samples must be analyzed. If the enhanced sampling event indicates that appendix XII constituents are present in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the department, and repeat the appendix XII analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentration of these additional constituents to the department within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then the owner or operator must report the concentrations of these additional constituents to the department within seven days after completion of the initial analysis and add them to the monitoring list.
8. If the owner or operator determines pursuant to subsection 4 that any concentration limits under section 33.1-24-05-51 are being exceeded at any monitoring well at the point of compliance, the owner or operator must:
 - a. Notify the department of this finding in writing within seven days. The notification must indicate what concentration limits have been exceeded.
 - b. Submit to the department an application for a permit modification to establish a corrective action program meeting the requirements of section 33.1-24-05-57 within one hundred eighty days, or within ninety days if an engineering feasibility study has been previously submitted to the department under subdivision e of subsection 7 of section 33.1-24-05-55. The application must, at a minimum, include the following information:

(1) A detailed description of corrective actions that will achieve compliance within the ground water protection standard specified in the permit under subsection 1.

(2) A plan for a ground water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

9. If the owner or operator determines, pursuant to subsection 4, that the ground water concentration limits under this section are being exceeded at any monitoring well at the point of compliance, the owner or operator may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration under this subsection, the owner or operator must:

a. Notify the department in writing within seven days that the owner or operator intends to make a demonstration under this subsection.

b. Within ninety days, submit a report to the department which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation.

c. Within ninety days, submit to the department an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility.

d. Continue to monitor in accordance with the compliance monitoring program established under this section.

10. If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, the owner or operator shall, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-57. Corrective action program.

An owner or operator required to establish a corrective action program under sections 33.1-24-05-47 through 33.1-24-05-58 shall, at a minimum, discharge the following responsibilities:

1. The owner or operator shall take corrective action to ensure that regulated units are in compliance with the ground water protection standard under section 33.1-24-05-49. The department will specify the ground water protection standard in the facility permit including:

a. A list of the hazardous constituents identified under section 33.1-24-05-50.

b. Concentration limits under section 33.1-24-05-51 for each of those hazardous constituents.

c. The compliance point under section 33.1-24-05-52.

d. The compliance period under section 33.1-24-05-53.

2. The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.

3. The owner or operator shall begin corrective action within a reasonable time period after the ground water protection standard is exceeded. The department will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate in lieu of subdivision b of subsection 9 of section 33.1-24-05-56.
4. In conjunction with a corrective action program, the owner or operator shall establish and implement a ground water monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under section 33.1-24-05-56 and must be as effective as that program in determining compliance with the ground water protection standard under section 33.1-24-05-49 and in determining the success of a corrective action program under subsection 5 where appropriate.
5. In addition to the other requirements of this section, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under section 33.1-24-05-50 that exceed concentration limits under section 33.1-24-05-51 in ground water:
 - a. Between the compliance point under section 33.1-24-05-52 and the downgradient property boundary; and
 - b. Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the department that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner or operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied. Onsite measures to address such releases will be determined on a case-by-case basis.
 - c. Corrective action measures under this subsection must be initiated and completed within a reasonable period of time considering the extent of contamination.
 - d. Corrective action measures under this subsection may be terminated once the concentration of hazardous constituents under section 33.1-24-05-50 is reduced to levels below their respective concentration limits under section 33.1-24-05-51.
6. The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the ground water protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, the owner or operator shall continue that corrective action for as long as necessary to achieve compliance with the ground water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if the owner or operator can demonstrate, based on data from the ground water monitoring program under subsection 4 that the ground water protection standard of section 33.1-24-05-49 has not been exceeded for a period of three consecutive years.
7. The owner or operator shall report in writing to the department on the effectiveness of the corrective action program. The owner or operator shall submit these reports annually.
8. If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, the owner or operator shall, within ninety days, submit an application for a permit modification to make any appropriate changes to the program.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-58. Corrective action for solid waste management units.

1. The owner or operator of a facility seeking a permit for the treatment, storage, or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.
2. Corrective action will be specified in the permit in accordance with this section and sections 33.1-24-05-550 through 33.1-24-05-559. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.
3. The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the department that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner or operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied. Onsite measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided.
4. This section does not apply to remediation waste management sites unless they are part of a facility subject to a permit for treating, storing, or disposing of hazardous wastes that are not remediation wastes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-59. Applicability of closure and postclosure requirements.

Except as section 33.1-24-05-01 provides otherwise:

1. Sections 33.1-24-05-60 through 33.1-24-05-64 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and
2. Sections 33.1-24-05-65 through 33.1-24-05-69 (which concern postclosure care) apply to the owners and operators of:
 - a. All hazardous waste disposal facilities;
 - b. Waste piles and surface impoundments from which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in section 33.1-24-05-119 or 33.1-24-05-135;
 - c. Tank systems that are required under section 33.1-24-05-110 to meet the requirements for landfills; and
 - d. Containment buildings that are required under section 33.1-24-05-477 to meet the requirement for landfills.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-60. Closure performance standard.

The owner or operator shall close the owner's or operator's facility in a manner that:

1. Minimizes the need for further maintenance;
2. Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
3. Complies with the closure requirements of sections 33.1-24-05-59 through 33.1-24-05-73, including the requirements of sections 33.1-24-05-97, 33.1-24-05-110, 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-151, 33.1-24-05-167, 33.1-24-05-180, 33.1-24-05-301 through 33.1-24-05-303, and section 33.1-24-05-477.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-61. Closure plan - Amendment of plan.

1. Written plan.

- a. The owner or operator of a hazardous waste management facility shall have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-122 and paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-135 to have contingent closure plans. The plan must be submitted with the permit application, in accordance with subdivision m of subsection 2 of section 33.1-24-06-17, and approved by the department as part of the permit issuance procedure under chapter 33.1-24-07. In accordance with section 33.1-24-06-05, the approved closure plan will become a condition of any hazardous waste permit.
- b. The department's approval of the plan must ensure that the approved closure plan is consistent with sections 33.1-24-05-60 through 33.1-24-05-64 and the applicable requirements of sections 33.1-24-05-47 through 33.1-24-05-58, 33.1-24-05-97, 33.1-24-05-110, 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-151, 33.1-24-05-167, 33.1-24-05-180, 33.1-24-05-301, and 33.1-24-05-477. Until final closure is completed and certified in accordance with section 33.1-24-05-64, a copy of the approved plan and all approved revisions must be furnished to the department upon request, including requests by mail.

2. Content of plan. The plan must identify steps necessary to perform partial or final, or both, closure of the facility at any point during its active life. The closure plan must include, at least:

- a. A description of how each hazardous waste management unit at the facility will be closed in accordance with section 33.1-24-05-60;
- b. A description of how final closure of the facility will be conducted in accordance with section 33.1-24-05-60. The description must identify the maximum extent of the operations which will be unclosed during the active life of the facility;

- c. An estimate of the maximum inventory of hazardous wastes ever onsite over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure, including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes, and identification of the types of the offsite hazardous waste management units to be used, if applicable;
- d. A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standards;
- e. A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closures satisfy the closure performance standards, including, but not limited to, ground water monitoring, leachate collection, and run-on and runoff control;
- f. A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included.);
- g. For facilities that use trust funds or establish financial assurance under section 33.1-24-05-77 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure; and
- h. A closure cost estimate.

3. **Amendment of plan.** The owner or operator must submit a written notification of, or request for, a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in chapters 33.1-24-06 and 33.1-24-07. The written notification or request must include a copy of the amended closure plan for review or approval by the department.

- a. The owner or operator may submit a written notification or request to the department for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility.
- b. The owner or operator must submit a written notification of, or request for, a permit modification to authorize a change in the approved closure plan when:
 - (1) Changes in operating plans or facility design affect the closure plan;
 - (2) There is a change in the expected year of closure, if applicable; or
 - (3) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.
- c. The owner or operator shall submit a written request for a permit modification, including a copy of the amended closure plan for approval at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator shall request a permit modification

no later than thirty days after the unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-122 or paragraph 1 of subdivision a of subsection 3 of section 33.1-24-05-135 shall submit an amended closure plan to the department no later than sixty days from the date that the owner or operator or department determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of section 33.1-24-05-180, or no later than thirty days from that date if the determination is made during partial or final closure. The department will approve, disapprove, or modify this amended plan in accordance with the procedures in chapters 33.1-24-06 and 33.1-24-07. In accordance with section 33.1-24-06-05, the approved closure plan will become a condition of the hazardous waste permit issued.

- d. The department may request modifications to the plan under the conditions described in subdivision b. The owner or operator shall submit the modified plan within sixty days of the department's request, or within thirty days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the department will be approved in accordance with procedures in chapters 33.1-24-06 and 33.1-24-07.

4. Notification of partial closure and final closure.

- a. The owner or operator shall notify the department in writing at least sixty days prior to the date on which the owner or operator expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator shall notify the department in writing at least forty-five days prior to the date on which the owner or operator expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner or operator must notify the department in writing at least forty-five days prior to the date which the owner or operator expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.

- b. The date when the owner or operator "expects to begin closure" must be either no later than thirty days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous waste, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the department that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and the owner or operator has taken and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the department may approve an extension to this one-year limit.

- c. If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final order under North Dakota Century Code section 23.1-04-14, to cease receiving hazardous waste or to close, then the requirements of this subsection do not apply. However, the owner or operator shall close the facility in accordance with the deadlines established in section 33.1-24-05-62.

5. Removal of wastes and decontamination or dismantling of equipment. Nothing in this section precludes the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-62. Closure - Time allowed for closure.

1. Within ninety days after receiving the final volume of hazardous wastes at a hazardous waste management unit or facility, the owner or operator shall treat, remove from the unit or facility, or dispose of onsite, all hazardous wastes in accordance with the approved closure plan. The department may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that one or both of the following subdivisions apply:

a. The activities required to comply with this subsection will, of necessity, take longer than ninety days to complete; or

b. All of the following apply:

(1) The hazardous waste management unit or facility has the capacity to receive additional hazardous waste;

(2) There is a reasonable likelihood that the owner or operator or another person will recommence operation of the hazardous waste management unit or the facility within one year;

(3) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(4) The owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

2. The owner or operator shall complete partial and final closure activities in accordance with the approved closure plan and within one hundred eighty days after receiving the final volume of hazardous wastes at the hazardous waste management unit or facility. The department may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that one or both of the following subdivisions apply:

a. The partial or final closure activities will, of necessity, take longer than one hundred eighty days to complete; or

b. All of the following apply:

(1) The hazardous waste management unit or facility has the capacity to receive additional hazardous waste;

(2) There is reasonable likelihood that the owner or operator or another person will recommence operation of the hazardous waste management unit or the facility within one year;

(3) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(4) The owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous

waste management unit or facility including compliance with all applicable permit requirements.

3. The demonstrations referred to in subsections 1 and 2 must be made as follows: The demonstrations in subsection 1 must be made at least thirty days prior to expiration of the ninety-day period in subsection 1; and the demonstration in subsection 2 must be made at least thirty days prior to the expiration of the one hundred eighty-day period in subsection 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-63. Disposal or decontamination of equipment, structures, and soils.

During the partial and final closure periods, all contaminated equipment, structures, and soils must be properly disposed of or decontaminated unless otherwise specified in sections 33.1-24-05-110, 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-167, or 33.1-24-05-180. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and shall handle that waste in accordance with all applicable requirements of chapter 33.1-24-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-64. Certification of closure.

Within sixty days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within sixty days of the completion of final closure, the owner or operator shall submit to the department, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by a qualified professional engineer. Documentation supporting the professional engineer's certification must be furnished to the department upon request until the department releases the owner or operator from the financial assurance requirements for closure under subsection 9 of section 33.1-24-05-77.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-65. Survey plat.

No later than the submission of the certification of closure of each hazardous waste disposal unit, the owner or operator shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the department, a survey plot indicating the location and dimensions of landfill cells, or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with a local zoning authority or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable regulations under sections 33.1-24-05-59 through 33.1-24-05-73.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-66. Postclosure care and use of property.

1. Postclosure care requirements.

a. Postclosure care for each hazardous waste management unit subject to the requirements of sections 33.1-24-05-66 through 33.1-24-05-69 must begin after completion of closure of the unit and continue for thirty years after that date and must consist of at least the following:

(1) Monitoring and reporting in accordance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-118 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, and sections 33.1-24-05-300 through 33.1-24-05-309; and

(2) Maintenance and monitoring of waste containment systems in accordance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-118 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, and sections 33.1-24-05-300 through 33.1-24-05-309.

b. Anytime preceding partial closure of a hazardous waste management unit subject to postclosure care requirements or final closure, or anytime during the postclosure period for a particular unit, the department may, in accordance with the permit modification procedures in chapters 33.1-24-06 and 33.1-24-07:

(1) Shorten the postclosure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if the department finds that the reduced period is sufficient to protect human health and the environment (for example, leachate or ground water monitoring results, characteristics of the hazardous waste, application of advanced technology or alternative disposal, treatment, or reuse techniques indicate that the hazardous waste management unit or facility is secure); or

(2) Extend the postclosure care period applicable to the hazardous waste management unit or facility if the department finds that the extended period is necessary to protect human health or the environment (for example, leachate or ground water monitoring results indicate a potential for migration of hazardous waste at levels which may be harmful to human health or the environment).

2. The department may require, at partial and final closure, continuation of any of the security requirements of section 33.1-24-05-05 during part or all of the postclosure period when:

a. Hazardous wastes may remain exposed after completion of partial or final closure; or

b. Access by the public or domestic livestock may pose a hazard to human health.

3. Postclosure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liners, or any other components of the containment system, or the function of the facility's monitoring systems, unless the department finds that the disturbance:

a. Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

b. Is necessary to reduce a threat to human health or the environment.

4. All postclosure care activities must be in accordance with the provisions of the approved postclosure plan as specified in section 33.1-24-05-67.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-67. Postclosure plan - Amendment of plan.

1. Written plan. The owner or operator of a hazardous waste disposal unit shall have a written postclosure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-122 and paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-135 to have contingent postclosure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent postclosure plans under paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-122 and paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-135 shall submit a postclosure plan to the department within ninety days from the date that the owner or operator or department determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of sections 33.1-24-05-66 through 33.1-24-05-69. The plan must be submitted with the permit application in accordance with section 33.1-24-06-17, and approved by the department as part of the permit issuance procedure under chapter 33.1-24-07. In accordance with section 33.1-24-06-05, the approved postclosure plan will become a condition of any hazardous waste permit issued.
2. For each hazardous waste management unit subject to the requirements of this section, the postclosure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:
 - a. A description of the planned monitoring activities and frequencies at which they will be performed to comply with sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-118 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, and sections 33.1-24-05-300 through 33.1-24-05-309 during the postclosure care period;
 - b. A description of the planned maintenance activities, and frequencies at which they will be performed to ensure:
 - (1) The integrity of the cap and final cover or other containment systems in accordance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-118 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, and sections 33.1-24-05-300 through 33.1-24-05-309;
 - (2) The function of the monitoring equipment in accordance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-118 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, and sections 33.1-24-05-300 through 33.1-24-05-309; and
 - c. The name, address, and telephone number of the persons or office to contact about the hazardous waste disposal unit or facility during the postclosure care period.
3. Until final closure of the facility, a copy of the approved postclosure plan must be furnished to the department upon request, including request by mail. After final closure has been certified, the person or office specified in subdivision c of subsection 2 shall keep the approved postclosure plan during the remainder of the postclosure period.

4. The owner or operator must submit a written notification of, or request for, a permit modification to authorize a change in the approved postclosure plan in accordance with the applicable requirements in chapters 33.1-24-06 and 33.1-24-07. The written notification or request must include a copy of the amended postclosure plan for review or approval by the department.

a. The owner or operator may submit a written notification or request to the department for a permit modification to amend the postclosure plan at any time during the active life of the facility or during the postclosure care period.

b. The owner or operator must submit a written notification of, or request for, a permit modification to authorize a change in the approved postclosure plan whenever:

(1) Changes in operating plans or facility design affect the approved postclosure plan;

(2) There is a change in the expected year of final closure, if applicable; or

(3) Events which occur during the active life of the facility, including partial and final closures, affect the approved postclosure plan.

c. The owner or operator shall submit a written request for a permit modification at least sixty days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the postclosure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent postclosure plan under paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-122 and paragraph 2 of subdivision a of subsection 3 of section 33.1-24-05-135 shall submit a postclosure plan to the department no later than ninety days after the date that the owner or operator or department determine that the hazardous waste management unit must be closed as a landfill, subject to the requirements of section 33.1-24-05-180. The department will approve, disapprove, or modify this plan in accordance with the procedures in chapters 33.1-24-06 and 33.1-24-07. In accordance with section 33.1-24-06-05, the approved postclosure plan will become a permit condition.

d. The department may request modifications to the plan under the conditions described in subdivision b. The owner or operator shall submit the modified plan no later than sixty days after the department's request, or no later than ninety days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent postclosure plan. Any modifications requested by the department will be approved, disapproved, or modified in accordance with the procedures in chapters 33.1-24-06 and 33.1-24-07.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-68. Postclosure notices.

1. No later than sixty days after certification of closure of each hazardous waste disposal unit, the owner or operator shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the department a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous waste disposed of before January 12, 1981, the owner or operator shall identify the type, location, and quantity of the hazardous wastes to the best of the owner's or operator's knowledge and in accordance with any records the owner or operator has kept.

2. Within sixty days of certification of closure of the first hazardous waste disposal unit and within sixty days of certification of closure of the last hazardous waste disposal unit, the owner or operator shall:

a. Record, in accordance with state law, a notation on the deed to the facility property - or on some other instrument which is normally examined during title search - that will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used to manage hazardous waste;

(2) Use of the land is restricted under sections 33.1-24-05-59 through 33.1-24-05-73; and

(3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by section 33.1-24-05-65 and subsection 1 have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the department; and

b. Submit a certification, signed by the owner or operator, that the owner or operator has recorded the notation specified in subdivision a of subsection 2, including a copy of the document in which the notation has been placed, to the department.

3. If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, the owner or operator shall request a modification to the postclosure permit in accordance with the applicable requirements in chapters 33.1-24-06 and 33.1-24-07. The owner or operator shall demonstrate that the removal of the hazardous waste will satisfy the criteria of subsection 3 of section 33.1-24-05-66. By removing hazardous waste, the owner or operator may become a generator of hazardous waste and shall manage it in accordance with all applicable requirements of this article. If the owner or operator is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the department approve either:

a. The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

b. In addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-69. Certification of completion of postclosure care.

No later than sixty days after completion of the established postclosure care period for each hazardous waste disposal unit, the owner or operator shall submit to the department, by registered mail, a certification that the postclosure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved postclosure plan. The certification must be signed by the owner or operator and a qualified professional engineer. Documentation supporting the professional engineer's certification must be furnished to the department upon request until the department releases the owner or operator from the financial assurance requirements for postclosure care under subsection 9 of section 33.1-24-05-77.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-70. [Reserved]

33.1-24-05-71. [Reserved]

33.1-24-05-72. [Reserved]

33.1-24-05-73. [Reserved]

33.1-24-05-74. Applicability of financial requirements.

1. The requirements of sections 33.1-24-05-76, 33.1-24-05-77, and 33.1-24-05-79 through 33.1-24-05-81 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this section or in section 33.1-24-05-01.
2. The requirements of sections 33.1-24-05-76 and 33.1-24-05-77 apply only to owners and operators of:
 - a. Disposal facilities;
 - b. Piles, and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in sections 33.1-24-05-122 and 33.1-24-05-135;
 - c. Tank systems that are required under section 33.1-24-05-110 to meet the requirements for landfills; and
 - d. Containment buildings that are required under section 33.1-24-05-477 to meet the requirements for landfills.
3. Federal agencies and agencies of the government of the state of North Dakota are exempt from the financial requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-75. Definitions of terms used in sections 33.1-24-05-74 through 33.1-24-05-88.

1. "Closure plan" means the plan for closure prepared in accordance with the requirements of section 33.1-24-05-61.
2. "Current closure cost estimate" means the most recent of the closure cost estimates prepared in accordance with subsections 1, 2, and 3 of section 33.1-24-05-76.
3. "Current postclosure cost estimate" means the most recent of the postclosure cost estimates prepared in accordance with subsections 1, 2, and 3 of section 33.1-24-05-76.
4. "Parent corporation" means a corporation which directly owns at least fifty percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.
5. "Postclosure plan" means the plan for postclosure care prepared in accordance with the requirements of sections 33.1-24-05-66 through 33.1-24-05-69.

6. The following terms are used in the specifications for the financial tests for closure, postclosure care, and liability coverage. The definitions are intended to assist in the understanding of these sections and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

"Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

"Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

"Current liability" means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

"Current plugging and abandonment cost estimate" means the most recent of the estimates prepared in accordance with 40 CFR part 144.62(a), (b), and (c).

"Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

"Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

"Net working capital" means current assets minus current liabilities.

"Net worth" means total assets minus total liabilities and is equivalent to owners equity.

"Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

7. In the liability insurance requirements, the terms "bodily injury" and "property damage" have the meanings given these terms by applicable state law. However, these terms do not include those liabilities which, consistent with standard industry practices, are excluded from coverage and liability policies for bodily injury and property damage. The department intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in any way that conflicts with general insurance industry usage.

"Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage, neither expected nor intended from the standpoint of the insured.

"Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

"Nonsudden accidental occurrence" means an occurrence which takes place over time and involves continuous or repeated exposure.

"Sudden accidental occurrence" means an occurrence which is not continuous or repeated in nature.

8. "Substantial business relationship" means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-76. Cost estimates for closure and postclosure care.

1. The cost estimates for closure.

- a. The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in sections 33.1-24-05-60 through 33.1-24-05-64 and applicable closure requirements in sections 33.1-24-05-97, 33.1-24-05-110, 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-151, 33.1-24-05-167, 33.1-24-05-180, sections 33.1-24-05-301 through 33.1-24-05-303, and section 33.1-24-05-477.

(1) The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see subsection 2 of section 33.1-24-05-61).

(2) The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in subsection 4 of section 33.1-24-05-75.) The owner or operator may use costs for onsite disposal if the owner or operator can demonstrate that onsite disposal capacity will exist at all times over the life of the facility.

(3) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.

(4) The owner or operator may not incorporate a zero cost for hazardous wastes that might have economic value.

- b. During the active life of the facility, the owner or operator shall adjust the closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with section 33.1-24-05-77. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before submission of updated information to the department as specified in subdivision c of subsection 6 of section 33.1-24-05-77. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent implicit price deflator for gross national product published by the United States department of commerce in its survey of current business as specified in paragraphs 1 and 2. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.

(1) The first adjustment is made by multiplying the closure cost estimates by the inflation factor. The result is the adjusted closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimates by the latest inflation factor.

c. During the active life of the facility, the owner or operator shall revise the closure cost estimate no later than thirty days after the department has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in subdivision b.

d. The owner or operator shall keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with subdivisions a and c and, when this estimate has been adjusted in accordance with subdivision b, the latest adjusted closure cost estimate.

2. Cost estimate for postclosure care.

a. The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment, or landfill unit, or a surface impoundment or waste pile required under sections 33.1-24-05-122 and 33.1-24-05-135 to prepare a contingent closure and postclosure plan, shall have a detailed written estimate in current dollars, of the annual cost of postclosure monitoring and maintenance of the facility in accordance with the applicable postclosure rules in sections 33.1-24-05-66 through 33.1-24-05-69, sections 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-167, 33.1-24-05-180, and 33.1-24-05-303.

(1) The postclosure cost estimate must be based on the cost to the owner or operator of hiring a third party to conduct postclosure care activities. A third party is a party who is neither a parent or subsidiary of the owner or operator. (See definition of parent corporation in subsection 4 of section 33.1-24-05-75.)

(2) The postclosure cost estimate is calculated by multiplying the annual postclosure cost estimate by the number of years of postclosure care required under section 33.1-24-05-66.

b. During the active life of the facility, the owner or operator shall address the postclosure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with section 33.1-24-05-77. For owners or operators using the financial test or corporate guarantee, the postclosure cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before the submission of updated information to the department as specified in subdivision e of subsection 6 of section 33.1-24-05-77. The adjustment may be made by recalculating the postclosure cost estimate in current dollars or by using an inflation factor derived from the most recent implicit price deflator for gross national product published by the United States department of commerce in a survey of current business as specified in paragraphs 1 and 2. The inflation factor is the result of dividing the latest annual published deflator by the deflator for the previous year.

(1) The first adjustment is made by multiplying the postclosure cost estimate by the inflation factor. The result is the adjusted postclosure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted postclosure cost estimate by the latest inflation factor.

c. During the active life of the facility, the owner or operator shall revise the postclosure cost estimate within thirty days after the department has approved a request to modify the postclosure plan, if the change in the postclosure plan increases the cost of postclosure

care. The revised postclosure cost estimate must be adjusted for inflation as specified in subdivision b.

- d. The owner or operator shall keep the following at the facility during the operating life of the facility: the latest postclosure cost estimate prepared in accordance with subdivisions a and c and, when this estimate has been adjusted in accordance with subdivision b, the latest adjusted postclosure cost estimate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-77. Financial assurance for closure and postclosure care.

In accordance with section 33.1-24-05-74, an owner or operator of each facility shall establish financial assurance for closure and postclosure of the facility. The owner or operator of a hazardous waste management unit subject to the postclosure requirements of section 33.1-24-05-76 shall establish financial assurance for postclosure care in accordance with the approved postclosure plan for the facility sixty days prior to the initial receipt of hazardous waste or the effective date of the regulations, whichever is later. The owner or operator shall choose from the options as specified in subsections 1 through 6.

1. Closure and postclosure trust fund.

- a. An owner or operator may satisfy the requirements of this section by establishing a closure and postclosure trust fund which conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the department. An owner or operator of the new facility shall submit the originally signed duplicate of the trust agreement to the department at least sixty days before the day on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be an entity which has the authority to act as a trustee in this state and whose trust operations are regulated and examined by a federal agency or by the state department of financial institutions.

- b. The wording of the trust agreement must be identical to the wording specified in subdivision a of subsection 1 of section 33.1-24-05-81 and the trust agreement must be accompanied by a formal certification of acknowledgment (for example see subdivision b of subsection 1 of section 33.1-24-05-81). Schedule A of the trust agreement must be updated within sixty days after a change in the amount of the current closure and postclosure cost estimate covered by the agreement.

- c. Payments into the trust fund must be made annually by the owner or operator over the term of the initial hazardous waste permit or over the remaining operating life of the facility as estimated in the closure plan, whichever period is shorter; this period is hereinafter referred to as the "pay-in period". The payments into the trust fund must be made as follows:

- (1) For a new facility the first payment must be made before the initial receipt of hazardous waste for treatment, storage, or disposal. A receipt from the trustee for this payment must be submitted by the owner or operator to the department before the initial receipt of hazardous waste. The first payment must be at least equal to the current closure and postclosure cost estimate, except as provided in subsection 7, divided by the number of years in the pay-in period. Subsequent payments must be made no later than thirty days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by this formula:

$$\text{Next Payment} \quad \equiv \quad \frac{\text{CE-CV}}{\text{N}}$$

Y

Where CE is the current closure and postclosure cost estimate, CV is the current value of the trust fund and Y is the number of years remaining in the pay-in period.

- (2) If an owner or operator establishes a trust fund as specified in 40 CFR part 265.143(a) or 265.145(a) of the federal hazardous waste regulations and the value of that trust fund is less than the current closure and postclosure cost estimate when a permit is awarded to the facility, the amount of the current closure and postclosure cost estimate still to be paid into the trust fund must be paid in over the pay-in period as defined in subdivision c. Payments must continue to be made no later than thirty days after each anniversary date of the first payment made pursuant to 40 CFR part 265. The amount of each payment must be determined by this formula:

$$\text{Next Payment} = \frac{\text{CE}-\text{CV}}{\text{Y}}$$

Where CE is the current closure and postclosure cost estimate, CV is the current value of the trust fund and Y is the number of years remaining in the pay-in period.

- d. The owner or operator may accelerate payments into the trust fund or the owner or operator may deposit the full amount of the current closure and postclosure cost estimate at the time the fund is established. However, the owner or operator shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in subdivision c.
- e. If the owner or operator establishes a closure and postclosure trust fund after having used one or more alternate mechanisms specified in this section (or in 40 CFR part 265.143 or 265.145), the first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments were made according to the specifications of subdivision c.
- f. After the pay-in period is completed, when the current closure and postclosure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator within sixty days after the change in the cost estimate shall either deposit an amount into the fund so that its value after the deposit at least equals the amount of the current closure and postclosure cost estimate or obtain other financial assurance as specified in this section to cover the difference.
- g. If the value of the trust fund is greater than the total amount of the current closure and postclosure cost estimate, the owner or operator may submit a written request to the department for release of the amount in excess of the current closure and postclosure cost estimate.
- h. If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, the owner or operator may submit a written request to the department for release of the amount in excess of the current closure and postclosure cost estimate covered by the trust fund.
- i. Within sixty days after receiving a request from the owner or operator for release of funds as specified in subdivision g or h, the department will instruct the trustee to release to the owner or operator such funds as the department specifies in writing.

j. During the period of postclosure care, the department may approve a release of funds if the owner or operator demonstrates to the department that the value of the trust fund exceeds the remaining cost of the postclosure care.

k. After beginning partial or final closure or during the postclosure care period, or both, an owner or operator or any other person authorized to perform partial or final closure or postclosure activities may request reimbursement for expenditures incurred during these activities by submitting itemized bills to the department. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum cost of closing the facility over its remaining operating life. Within sixty days after receiving bills for partial or final closure or postclosure activities, the department will determine whether the expenditures are in accordance with the closure or postclosure plans or otherwise justified and if so, the department will instruct the trustee to make reimbursement in such amounts as the department specifies in writing. If the department has reason to believe that the cost of closure will be significantly greater than the value of the trust fund, the department may withhold reimbursement of such amounts as the department deems prudent until the department determines in accordance with subsection 9 that the owner or operator is no longer required to maintain financial assurance for final closure. If the department does not instruct the trustee to make such reimbursements, the department will provide the owner or operator with a detailed written statement of reasons.

l. The department will agree to termination of the trust when:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 9.

2. Surety bond guaranteeing payment into a closure and postclosure trust fund.

a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the department. An owner or operator of a new facility must submit the bond to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the United States department of treasury and be authorized to do business within this state. If the surety is using reinsurance, a treasury reinsurance form must be submitted with the bond or within forty-five days thereafter. If cosureties are being used, the original bond must reflect that fact.

b. The wording of the surety bond must be identical to the wording specified in subsection 2 of section 33.1-24-05-81.

c. The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements specified in subsection 1 except that:

(1) An originally signed duplicate of the trust agreement must be submitted to the department with the surety bond; and

(2) Until the standby trust fund is funded pursuant to the requirements of this subsection, the following are not required by this chapter:

(a) Payments into the trust fund as specified in subsection 1.

(b) Updating of schedule A of the trust agreement to show current closure and postclosure cost estimates.

(c) Annual evaluations as required by the trust agreement.

(d) Notices of nonpayment as required by the trust agreement.

d. The bond must guarantee that the owner or operator will:

(1) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility;

(2) Fund the standby trust fund in an amount equal to the penal sum within fifteen days after an order to begin final closure is issued by the department or a United States district court or other court of competent jurisdiction; or

(3) Provide alternate financial assurance as specified in this section and obtain the department's written approval of the assurance provided within ninety days after receipt by both the owner or operator of a notice of cancellation of the bond from the surety.

e. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

f. The penal sum of the bond must be in an amount at least equal to the current closure and postclosure cost estimate, except as provided in subsection 7.

g. Whenever the current closure and postclosure cost estimate increases to an amount greater than the penal sum, the owner or operator within sixty days after the increase must either cause the penal sum to be increased to an amount at least equal to the current closure and postclosure cost estimate and submit evidence of such increase to the department or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure and postclosure cost estimate decreases, the penal sum may be reduced to the amount of the current closure and postclosure cost estimate following written approval by the department.

h. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of cancellation by both the owner or operator and the department as evidenced by the return receipts.

i. The owner or operator may cancel the bond if the department has given prior written consent based on the department's receipt of evidence of alternate financial assurance as specified in this section.

3. Surety bond guaranteeing performance of closure and postclosure care.

a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this subsection and submitting the bond to the department. An owner or operator of a new facility shall submit the bond to the department

at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those acceptable sureties on federal bonds in Circular 570 of the United States department of treasury and be authorized to do business within the state of North Dakota. If the surety is using reinsurance a treasury reinsurance form must be submitted with the bond or within forty-five days thereafter. If cosureties are being used, the original bond must reflect that fact.

b. The wording of the surety bond must be identical to the wording specified in subsection 3 of section 33.1-24-05-81.

c. The owner or operator who uses a surety bond to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements specified in subsection 1 except that:

(1) An originally signed duplicate of the trust agreement must be submitted to the department with the surety bond; and

(2) Until the standby trust fund is funded pursuant to the requirements of this subsection, the following are not required by this chapter:

(a) Payments into the trust fund as specified in subsection 1.

(b) Updating of schedule A of the trust agreement to show current closure and postclosure cost estimates.

(c) Annual valuations as required by the trust agreement.

(d) Notices of nonpayment as required by the trust agreement.

d. The bond must guarantee that the owner or operator will:

(1) Perform postclosure care and final closure in accordance with the postclosure and closure plan and other requirements of the permit for the facility when required to do so; or

(2) Provide alternate financial assurance as specified in this section and obtain the department's written approval of the assurance provided within ninety days after receipt by both the owner or operator and the department of a notice of cancellation of the bond from the surety.

e. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a determination by the department that the owner or operator has failed to perform postclosure care or final closure in accordance with the closure or postclosure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform the postclosure care or final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

f. The penal sum of the bond must be in an amount at least equal to the current closure or postclosure cost estimate, or both.

- g. Whenever the current closure or postclosure cost estimate, or both, increases to an amount greater than the penal sum, the owner or operator within sixty days after the increase must either cause the penal sum to be increased to an amount at least equal to the current closure or postclosure cost estimate, or both, and submit evidence of such increase to the department or obtain other financial assurance as specified in this section. Whenever the current closure or postclosure cost estimate, or both, decreases the penal sum may be reduced to the amount of the current closure or postclosure cost estimate, or both, following written approval by the department.
- h. During the period of postclosure care, the department may approve a decrease in the penal sum if the owner or operator demonstrates to the department that the amount exceeds the remaining cost of postclosure care.
- i. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of this notice of cancellation by both the owner or operator and the department as evidenced by the return receipts.
- j. The owner or operator may cancel the bond if the department has given prior written consent. The department will provide such written consent when:
 - (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
 - (2) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 9.
- k. The surety will not be liable for deficiencies in the performance of closure or postclosure care by the owner or operator after the department releases the owner or operator from the requirements of this subsection in accordance with subsection 9.

4. Closure and postclosure letter of credit.

- a. An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this subsection and submitting the letter to the department. An owner or operator of a new facility must submit the letter of credit to the department at least sixty days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit in this state and whose letters of credit operations are regulated and examined by a federal agency or by the state department of financial institutions.
- b. The wording of the letter of credit must be identical to the wording specified in subsection 4 of section 33.1-24-05-81.
- c. An owner or operator who uses a letter of credit to satisfy the requirements of this section shall also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the department. This standby trust fund must meet the requirements of the trust fund specified in subsection 1 except that:

(1) An originally signed duplicate of the trust agreement must be submitted to the department with the letter of credit.

(2) Unless the standby trust fund is funded pursuant to the requirements of this subsection the following are not required by this chapter:

(a) Payments into the trust fund as specified in subsection 1.

(b) Updating of schedule A of the trust agreement to show current or postclosure, or both, cost estimates.

(c) Annual valuations as required by the trust agreement; and

(d) Notices of nonpayment as required by the trust agreement.

d. The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution and date and providing the following information: The identification number, name, and address of the facility and the amount of funds assured for closure and postclosure care of the facility by the letter of credit.

e. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year unless at least one hundred twenty days before the current expiration date, the issuing institution notifies both the owner or operator and the department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the one hundred twenty days will begin on the date when both the owner or operator and the department have received notice as evidenced by the return receipts.

f. The letter of credit must be issued in an amount at least equal to the current closure or postclosure, or both, cost estimate, except as provided in subsection 7.

g. Whenever the current closure or postclosure or both, cost estimate, increases to an amount greater than the amount of the letter of credit during the operating life of the facility, the owner or operator within sixty days after the increase shall either cause the amount of the letter of credit to be increased so that it at least equals the current closure or postclosure, or both, cost estimate, and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure or postclosure, or both, cost estimate decreases, the amount of the credit may be reduced to the amount of the current estimate following written approval by the department.

h. During the period of postclosure care, the department may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the department that the amount exceeds the remaining cost of postclosure care.

i. Following a determination by the department that the owner or operator has failed to perform closure or postclosure care in accordance with the closure or postclosure plan or other permit requirements, the department may draw on the letter of credit.

j. If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the department within ninety days after receipt by both the owner or operator and the department of a notice from the issuing institution that the issuing institution has decided not to extend the letter of credit beyond the current expiration date, the department will draw on the letter of credit. The department may delay the drawing if the issuing institution grants an extension

of the term of the credit. During the last thirty days of any such extension, the department will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the department.

k. The department will return the letter of credit to the issuing institution when:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from requirements of this subsection in accordance with subsection 9.

5. Closure and postclosure insurance.

a. An owner or operator may satisfy the requirements of this section by obtaining closure and postclosure insurance which conforms to the requirements of this subsection and submitting a certificate of such insurance to the department. An owner or operator of a new facility must submit the certificate of insurance to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance in this state or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

b. The wording of the certificate of insurance must be identical to the wording specified in subsection 5 of section 33.1-24-05-81.

c. The closure and postclosure insurance policy must be issued for a face amount of at least equal to the current closure or postclosure, or both, cost estimate, except as provided in subsection 7. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

d. The closure and postclosure insurance policy must guarantee that funds will be available to close the facility or perform postclosure final care, or both, when final closure or the postclosure period begins. The policy must also guarantee that once final closure or postclosure begins the insurer will be responsible for paying out funds up to an amount equal to the face amount of the policy upon the direction of the department to such party or parties as the department specifies.

e. After beginning partial or final closure or during the postclosure period, or both, an owner or operator or any other person authorized to perform closure or postclosure may request reimbursement for closure or postclosure expenditures by submitting itemized bills to the department. The owner or operator may request reimbursement for partial closure only if the remaining value of the policy is sufficient to cover the maximum cost of closing the facility over its remaining operating life. Within sixty days after receiving bills for closure or postclosure activities, the department will determine whether the expenditures are in accordance with the partial or final closure or postclosure plan or otherwise justified and if so, the department will instruct the insurer to make reimbursement in such amounts as the department specifies in writing. If the department has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, the department may withhold reimbursement of such amounts as the department deems prudent until the department determines, in accordance with subsection 9, that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the department does not instruct the insurer to

make such reimbursement, the department will provide the owner or operator with a detailed written statement of reasons.

f. The owner or operator shall maintain the policy in full force and effect until the department consents to termination of the policy by the owner or operator as specified in subdivision k. Failure to pay the premium without substitution of alternate financial assurance, as specified in this section, will constitute a significant violation of this chapter warranting such remedy as the department deems necessary. Such violation will be deemed to begin upon receipt by the department of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

g. Each policy must contain a provision allowing assignment of the policy to a successor, owner, or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

h. The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy, except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the department. Cancellation, termination, or failure to renew may not occur, however, during the one hundred twenty days beginning with the date of receipt of a notice by the department and the owner or operator as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(1) The department deems the facility abandoned;

(2) The permit is terminated or revoked or a new permit is denied;

(3) Closure is ordered by the department or a state court or other court of competent jurisdiction;

(4) The owner or operator is named as debtor in a voluntary or involuntary proceeding under United States Code title 11 (bankruptcy); or

(5) The premium due is paid.

i. Whenever the current closure or postclosure, or both, cost estimate increases to an amount greater than the face amount of the policy, the owner or operator within sixty days after the increase must either cause the face amount to be increased to an amount at least equal to the current closure or postclosure, or both, cost estimate and submit evidence of such increase to the department, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure or postclosure, or both, cost estimate decreases, the face amount may be reduced to the amount of the current closure or postclosure, or both, cost estimate following a written approval by the department.

j. For postclosure insurance only, commencing on the date that liability to make payments pursuant to a postclosure policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy less any payments made, multiplied by an amount equivalent to eighty-five percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the United States treasury for twenty-six-week treasury securities.

k. The department will give written consent to the owner or operator that the owner or operator may terminate the insurance policy when:

- (1) An owner or operator substitutes alternate financial assurance as specified in this section; or
- (2) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 9.

6. Financial test and corporate guarantee for closure and postclosure care.

a. An owner or operator may satisfy the requirements of this section by demonstrating that the owner or operator passes a financial test as specified in this subsection. To pass this test, the owner or operator must meet the criteria of either paragraph 1 or paragraph 2.

(1) The owner or operator must have:

- (a) Two of the following three ratios: A ratio of total liabilities to net worth less than two; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than one-tenth; and a ratio of current assets to current liabilities greater than one and five-tenths;
- (b) Net working capital and tangible net worth each at least six times the sum of the current closure and postclosure cost estimates and the current plugging and abandonment cost estimate;
- (c) Tangible net worth of at least ten million dollars; and
- (d) Assets in the United States amounting to at least ninety percent of owner's or operator's total assets or at least six times the sum of the current closure and postclosure cost estimates, and the current plugging and abandonment cost estimates.

(2) The owner or operator must have:

- (a) A current rating for the owner's or operator's most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;
- (b) Tangible net worth at least six times the sum of the current closure and postclosure cost estimates and the current plugging and abandonment cost estimates;
- (c) Tangible net worth of at least ten million dollars; and
- (d) Assets located in the United States amounting to at least ninety percent of the owner's or operator's total assets or at least six times the sum of the current closure and postclosure cost estimates and the current plugging and abandonment cost estimates.

b. The phrase "current closure and postclosure cost estimates" as used in subdivision a refers to the cost estimates required to be shown in paragraphs 1 through 4 of the letter from the owner's or operator's chief financial officer (subsection 6 of section 33.1-24-05-81). The phrase "current plugging and abandonment cost estimates" as used in subdivision a refers to the cost estimates required to be shown in paragraphs 1 through 3 of the letter from the owner's or operator's chief financial officer (40 CFR part 144.70(f)).

- c. To demonstrate that the owner or operator meets the financial test, the owner or operator must submit the following items to the department:
- (1) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 6 of section 33.1-24-05-81;
 - (2) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and
 - (3) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:
 - (a) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and
 - (b) In connection with that procedure, no matters came to the accountant's attention which caused the accountant to believe that the specified data should be adjusted.
- d. An owner or operator of a new facility must submit the items specified in subdivision c to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal.
- e. After the initial submission of items specified in subdivision c, the owner or operator must send updated information to the department within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in subdivision c.
- f. If the owner or operator no longer meets the requirements of subdivision a, the owner or operator must send notice to the department of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within ninety days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within one hundred twenty days after the end of each fiscal year.
- g. The department may, based on a reasonable belief that the owner or operator may no longer meet the requirements of subdivision a, require reports of financial condition at any time from the owner or operator in addition to those specified in subdivision c. If the department finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of subdivision a, the owner or operator must provide alternate financial assurance specified in this section within thirty days after notification of such a finding.
- h. The department may disallow use of this test on the basis of qualification in the opinion expressed by the independent certified public accountant in the accountant's report on examination of the owner's or operator's statements (see paragraph 2 of subdivision c). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The department will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within thirty days after notification of the disallowance.

i. The owner or operator is no longer required to submit the items specified in subdivision c when:

(1) An owner or operator substitutes alternate financial assurance as specified in this section; or

(2) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 9.

j. An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in subdivisions a through h and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in subdivision a of subsection 8 of section 33.1-24-05-81. The certified copy of the guarantee must accompany the items sent to the department as specified in subdivision c. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(1) If the owner or operator fails to perform final closure or postclosure, or both, of a facility covered by the corporate guarantee in accordance with the closure or postclosure, or both, plan and other permit requirements when required to do so, the guarantor will do so or establish a trust fund as specified in subsection 1 in the name of the owner or operator.

(2) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the department, as evidenced by the return receipts.

(3) If the owner or operator fails to provide alternate financial assurance as specified in this section and fails to obtain the written approval of such alternate assurance from the department within ninety days after receipt by both the owner or operator and the department of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

k. Companies not required to submit an audited financial statement to the United States securities and exchange commission must have an auditor's opinion prepared by an auditor licensed in this state.

7. **The use of multiple financial mechanisms.** An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in this section, except that it is the combination of mechanisms, rather than the single mechanism which must provide financial assurance for an amount at least equal to the current closure or postclosure, or both, cost estimate. If an owner or operator uses a trust fund in combination with a surety

bond or a letter of credit, the owner or operator may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The department may use any or all of the mechanisms to provide for closure or postclosure, or both, care of the facility.

8. **Use of a financial mechanism for multiple facilities.** An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the department must include a list showing for each facility the identification number, name, address, and the amount of funds for closure or postclosure, or both, care assured by the mechanism. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure or postclosure care of any of the facilities covered by the mechanism, the department may direct only the amount of funds designated for that facility unless the owner or operator agrees to the use of additional funds available under the mechanism.

9. **Release of the owner or operator from the requirements of this section.** Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure or postclosure care, or both, has been completed in accordance with an approved closure or postclosure care plan, the department will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain financial assurance for final closure or postclosure care, or both, of the facility, unless the department has reason to believe that final closure or postclosure care, or both, has not been in accordance with the approved closure or postclosure care plans. The department shall provide the owner or operator a detailed written statement of any such reason to believe that closure or postclosure, or both, has not been in accordance with the approved closure or postclosure plans.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-78. Use of a financial mechanism for both closure and postclosure care.

An owner or operator may satisfy the requirements for financial assurance for both closure and postclosure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in section 33.1-24-05-77. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of postclosure care.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-79. Liability requirements.

1. **Coverage for sudden accidental occurrences.** An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million

dollars, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in subdivision a, b, c, d, e, or f:

a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subdivision.

(1) Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by a certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 9 of section 33.1-24-05-81. The wording of the certificate of insurance must be identical to the wording specified in subsection 10 of section 33.1-24-05-81. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department. If requested by the department, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the hazardous waste facility liability endorsement or the certificate of liability insurance to the department at least sixty days before the day on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(2) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

b. An owner or operator may meet the requirements of this subsection by passing a financial test or using the guarantee for liability coverage as specified in subsections 6 and 7.

c. An owner or operator may meet the requirements of this subsection by obtaining a letter of credit for liability coverage as specified in subsection 8.

d. An owner or operator may meet the requirements of this subsection by obtaining a surety bond for liability coverage as specified in subsection 9.

e. An owner or operator may meet the requirements of this subsection by obtaining a trust fund for liability coverage as specified in subsection 10.

f. An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this subsection. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subdivision, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurances as "excess" coverage.

g. An owner or operator shall notify the department in writing within thirty days when:

(1) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in subdivisions a through f; or

(2) A certification of valid claim for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste

treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under subdivisions a through f; or

- (3) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under subdivisions a through f.

2. Coverage for nonsudden accidental occurrences. An owner or operator of a surface impoundment, landfill, land treatment facility, or disposal miscellaneous unit which is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least three million dollars per occurrence with an annual aggregate of at least six million dollars, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences must maintain liability coverage in the amount of at least four million dollars per occurrence and eight million dollars annual aggregate. This liability coverage may be demonstrated as specified in subdivision a, b, c, d, e, or f:

- a. An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this subdivision.

(1) Each insurance policy must be amended by attachment of the hazardous waste facility liability endorsement or evidenced by certificate of liability insurance. The wording of the endorsement must be identical to the wording specified in subsection 9 of section 33.1-24-05-81. The wording of the certificate of insurance must be identical to the wording specified in subsection 10 of section 33.1-24-05-81. The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of insurance to the department. If requested by the department, the owner or operator shall provide a signed duplicate original of the insurance policy. An owner or operator of a new facility shall submit the signed duplicate original of the hazardous waste facility liability endorsement or the certificate of liability insurance to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(2) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

- b. An owner or operator may meet the requirements of this subsection by passing a financial test or using the guarantee for liability coverage as specified in subsections 6 and 7.

c. An owner or operator may meet the requirements of this subsection by obtaining a letter of credit for liability coverage as specified in subsection 8.

d. An owner or operator may meet the requirements of this subsection by obtaining a surety bond for liability coverage as specified in subsection 9.

e. An owner or operator may meet the requirements of this subsection by obtaining a trust fund for liability coverage as specified in subsection 10.

f. An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amount required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this subdivision, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

g. An owner or operator shall notify the department in writing within thirty days when:

(1) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in subdivisions a through f;

(2) A certification of valid claim for bodily injury or property damages caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under subdivisions a through f; or

(3) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under subdivisions a through f.

3. **Request for variance.** If an owner or operator can demonstrate to the satisfaction of the department that the levels of responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the department. The request for a variance must be submitted to the department as part of the permit application under chapter 33.1-24-06 for a facility that does not have a permit or pursuant to the procedures for permit modification under chapter 33.1-24-07 for a facility that has a permit. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The department may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the department to determine a level of financial responsibility other than that required by subsection 1 or 2. Any request for a variance for a permitted facility will be treated as a request for permit modification under chapters 33.1-24-06 and 33.1-24-07.

4. **Adjustments by the department.** If the department determines that the levels of financial responsibility required by subsection 1 or 2 are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the department may adjust the level of financial responsibility required under subsection 1 or 2 as may be necessary to protect human health and the environment. This adjusted level will be based on the department's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the department determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operation of a facility that is not a surface impoundment, landfill, or land treatment facility, the department may require that an owner or

operator of the facility comply with subsection 2. An owner or operator shall furnish to the department within a reasonable time any information which the department requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a type of facility that has a permit will be treated as a permit modification under chapters 33.1-24-06 and 33.1-24-07.

5. **Period of coverage.** Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the department will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain liability coverage for that facility, unless the department has reason to believe that closure has not been in accordance with the approved closure plan.

6. **Financial tests for liability coverage.**

a. An owner or operator may satisfy the requirements of this section by demonstrating that the owner or operator passes a financial test as specified in this subsection. To pass this test the owner or operator must meet the criteria of paragraph 1 or paragraph 2:

(1) The owner or operator must have:

(a) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test;

(b) Tangible net worth of at least ten million dollars; and

(c) Assets in the United States amounting to either: (1) at least ninety percent of the owner's or operator's total assets; or (2) at least six times the amount of liability coverage to be demonstrated by this test.

(2) The owner or operator must have:

(a) A current rating for the owner's or operator's most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's;

(b) Tangible net worth of at least ten million dollars;

(c) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(d) Assets in the United States amounting to either: (1) at least ninety percent of the owner's or operator's total assets; or (2) at least six times the amount of liability coverage to be demonstrated by this test.

b. The phrase "amount of liability coverage" as used in subdivision a refers to the annual aggregate amounts for which coverage is required under subsections 1 and 2.

c. To demonstrate that the owner or operator meets this test, the owner or operator must submit the following three items to the department:

(1) A letter signed by the owner's or operator's chief financial officer and worded as specified in subsection 7 of section 33.1-24-05-81. If an owner or operator is using the financial test to demonstrate both assurance for closure or postclosure care, as specified by subsection 6 of section 33.1-24-05-77, and liability coverage, the owner or operator must submit the letter specified in subsection 7 of section 33.1-24-05-81

to cover both forms of financial responsibility; a separate letter as specified in subsection 6 of section 33.1-24-05-81 is not required.

(2) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(3) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(a) The accountant has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts of such financial statements; and

(b) In connection with that procedure, no matters came to the accountant's attention which cause the accountant to believe that the specified data should be adjusted.

d. An owner or operator of a new facility must submit the items specified in subdivision c to the department at least sixty days before the date on which hazardous waste is first received for treatment, storage, or disposal.

e. After the initial submission of items specified in subdivision c, the owner or operator must send updated information to the department within ninety days after the close of each succeeding fiscal year. This information must consist of all three items specified in subdivision c.

f. If the owner or operator no longer meets the requirements of subdivision a, the owner or operator must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the department within ninety days after the end of the fiscal year for which the year-end financial data shows that the owner or operator no longer meets the test requirements.

g. The department may disallow use of this test on the basis of qualifications and the opinion expressed by the independent certified public accountant in the accountant's report on examination of the owner's or operator's financial statement (see paragraph 2 of subdivision c). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The department will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in this section within thirty days after notification or disallowance.

7. Guarantee for liability coverage.

a. Subject to subdivision b, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee". The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in subdivisions a through f of subsection 6. The wording of the guarantee must be identical to the wording specified in subdivision b of subsection 8 of section 33.1-24-05-81. A certified copy of the guarantee must accompany the items sent to the department as specified in subdivision c of subsection 6. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe

the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the new guarantee.

If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of the coverage.

b. The following applies:

(1) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the attorneys general or insurance commissioners of (a) the state in which the guarantor is incorporated, and (b) each state in which a facility covered by the guarantee is located have submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 8 of section 33.1-24-05-81 is a legally valid and enforceable obligation in that state.

(2) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if (a) the non-United States corporation has identified a registered agent for service of process in each state in which a facility covered by the guarantee is located and in the state in which it has its principal place of business, and (b) the attorney general or insurance commissioner of each state in which a facility covered by the guarantee is located and the state in which the guarantor corporation has its principal place of business, has submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 8 of section 33.1-24-05-81 is a legally valid and enforceable obligation in that state.

8. Letter of credit for liability coverage.

a. An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this subsection and submitting a copy of the letter of credit to the department.

b. The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

c. The wording of the letter of credit must be identical to the wording specified in subsection 11 of section 33.1-24-05-81.

d. An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

e. The wording of the standby trust fund must be identical to the wording specified in subsection 14 of section 33.1-24-05-81.

9. Surety bond for liability coverage.

a. An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this subsection and submitting a copy of the bond to the department.

b. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the most recent circular 570 of the United States department of the treasury.

c. The wording of the surety bond must be identical to the wording specified in subsection 12 of section 33.1-24-05-81.

d. A surety bond may be used to satisfy the requirements of this section only if the attorneys general or insurance commissioners of (1) the state in which the surety is incorporated, and (2) each state in which a facility covered by the surety bond is located have submitted a written statement to the department that a surety bond executed as described in this section and in subsection 12 of section 33.1-24-05-81 is a legally valid and enforceable obligation in that state.

10. Trust fund for liability coverage.

a. An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this subsection and submitting an originally signed duplicate of the trust agreement to the department.

b. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

c. The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided or obtain other financial assurance as specified in this section to cover the difference. For purposes of this subdivision, "the full amount of the liability coverage to be provided" means the amount of coverage for sudden or nonsudden occurrences, or both, required to be provided by the owner or operator by this section, less the amounts of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

d. The wording of the trust fund must be identical to the wording specified in subsection 13 of section 33.1-24-05-81.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-80. Incapacity of owners or operators, guarantors, or financial institutions.

1. An owner or operator must notify the department by certified mail of the commencement of a voluntary or involuntary proceeding under United States Code title 11 (bankruptcy), naming the owner or operator as debtor within ten days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in subsection 6 of section 33.1-24-05-77 or in subsection 7 of section 33.1-24-05-79 must make such notification if the guarantor is named as debtor as required under the terms of the corporate guarantee.
2. An owner or operator who fulfills the requirements of section 33.1-24-05-77 or 33.1-24-05-79 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as a trustee, or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator shall establish other financial assurance or liability coverage within sixty days after such an event.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-81. Wording of the instruments.

1. Trust agreement and certification of acknowledgment.
 - a. A trust agreement for a trust fund as specified in section 33.1-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT, the "AGREEMENT" entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation", "partnership", "association", or "proprietorship"], the "GRANTOR", and [name of corporate trustee], [insert "incorporated in the state of _____" or "a national bank"], the "TRUSTEE".

Whereas, the North Dakota Department of Environmental Quality, "DEPARTMENT" a regulatory agency of the state of North Dakota, has established certain regulations applicable to the GRANTOR requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure or postclosure, or both, care of the facility,

Whereas, the GRANTOR has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the GRANTOR acting through its duly authorized officers has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT and the TRUSTEE is willing to act as TRUSTEE,

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

- (a) The term GRANTOR means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.
- (b) The term TRUSTEE means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities and Cost Estimate. This AGREEMENT pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A for each facility list the identification number, name, and the current closure or postclosure, or both, cost estimates or portions thereof for which financial assurance is demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a trust fund, the FUND, for the benefit of the DEPARTMENT. The GRANTOR and the TRUSTEE intend that no third party have access to the FUND, except as herein provided. The FUND is established initially as consisting of the property which is acceptable to the TRUSTEE and described in Schedule B attached hereto. Such property and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND must be held by the TRUSTEE, IN TRUST, as herein provided. The TRUSTEE is not responsible, nor may it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payment for Closure and Postclosure Care. The TRUSTEE shall make payments from the FUND as the DEPARTMENT shall direct, in writing, to provide for the payment of the cost of closure, and or postclosure care of the facilities covered by this AGREEMENT. The TRUSTEE shall reimburse the GRANTOR or other persons as specified by the DEPARTMENT from the FUND for closure and postclosure expenditures in such amounts as the DEPARTMENT shall direct in writing. In addition, the TRUSTEE shall refund to the GRANTOR such amounts as the DEPARTMENT specifies in writing. Upon refund such funds no longer constitute part of the FUND as defined herein.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND must consist of cash or securities acceptable to the TRUSTEE.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income of the FUND and keep the FUND invested as a single FUND without distinction between principal and income in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject however to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the trustee's duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the GRANTOR or any other owner or operator of the facilities or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), may not be acquired or held unless they are securities or other obligations of a federal or state government;
- (b) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (c) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common, commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without, in any way, eliminating the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE is bound to see the application of the purchase money or to inquire into the validity or expediency of any such sale or disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE must at all times show that all such securities are part of the FUND;
- (d) To deposit any cash in the FUND in interest-bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate capacity, or in any other banking institution affiliated with the TRUSTEE to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the FUND.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this TRUST, including fees for legal services rendered to the TRUSTEE, the compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements of the TRUSTEE, must be paid from the FUND.

Section 10. Annual Valuation. The TRUSTEE shall annually, at least thirty days prior to the anniversary date of establishment of the FUND, furnish to the GRANTOR and to the DEPARTMENT a statement confirming the value of the TRUST. Any securities in the FUND must be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the FUND. The failure of the GRANTOR to object in writing to the TRUSTEE within ninety days after the statement has been furnished to the GRANTOR and the DEPARTMENT, constitutes a conclusively binding assent by the GRANTOR barring the GRANTOR from asserting any claim or liability against the TRUSTEE with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR, with respect to any question arising as to construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected to the extent permitted by law in acting upon the advice of counsel.

Section 12. TRUSTEE Compensation. The TRUSTEE is entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 13. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement is not effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE'S acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason, the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the TRUST in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section must be paid as provided in section 9.

Section 14. Instructions to the TRUSTEE. All orders, requests, and instructions by the GRANTOR to the TRUSTEE must be in writing, signed by such persons as are designated in the attached Exhibit A, or such other designees as the GRANTOR may designate by amendment to Exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR'S orders, requests, and instructions. All orders, requests, and instructions by the DEPARTMENT to the TRUSTEE must be in writing, signed by an authorized DEPARTMENT representative and the TRUSTEE shall act and be fully protected in acting in accordance with such orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or the DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR or the DEPARTMENT, or both, except as provided for herein.

Section 15. Notice of Nonpayment. The TRUSTEE shall notify the GRANTOR and the DEPARTMENT by certified mail within ten days following the expiration of the thirty-day period after the anniversary of the establishment of the TRUST if no payment is received from the GRANTOR during that period. After the pay-in period is completed, the TRUSTEE is not required to send a notice of nonpayment.

Section 16. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in section 16, this TRUST is irrevocable and continues until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the TRUST, all remaining trust property, less final trust administration expenses, must be delivered to the GRANTOR.

Section 18. Immunity and Indemnification. The TRUSTEE may not incur personal liability of any nature in connection with any act or omission made in good faith in the administration of this TRUST or in carrying out any directions by the GRANTOR or the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE must be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 19. Choice of Law. This AGREEMENT must be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 20. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT do not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto fixed and attested as of the date first above written: The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subdivision a of subsection 1 of North Dakota Administrative Code section 33.1-24-05-81 as such regulation was constituted on the date first above written.

[Signature of GRANTOR]

[Title]

[Attest:]

[Title]

[Seal]

[Signature of TRUSTEE]

[Attest:]

[Title]

[Seal]

-
- b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a trust fund as specified in subsection 1 of section 33.1-24-05-77.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

2. A surety bond guaranteeing payment into a trust fund as specified in subsection 2 of section 33.1-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "joint venture", "partnership", or "corporation"]

State of incorporation: _____

Surety(ies): [name(s) and business address(es)]

Identification number, name, address, and closure or postclosure, or both, amount for each facility guaranteed by this bond [indicate closure and postclosure amounts separately]:

Total penal sum of bond: \$ _____

Surety's bond number: _____

Know all persons by these presents that we the PRINCIPAL and SURETY(IES) hereto are firmly bound to the North Dakota Department of Environmental Quality (hereinafter called the DEPARTMENT) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assignors jointly and severally; provided that where the SURETY(IES) are corporations acting as cosureties, we, the SURETIES, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each SURETY binds itself, jointly and severally with the PRINCIPAL, for the payment of such sum only as is set forth opposite the name of such SURETY, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said PRINCIPAL is required under North Dakota Century Code chapter 23.1-04 to have a permit in order to own or operate each hazardous waste management facility identified above, and

Whereas said PRINCIPAL is required to provide financial assurance for closure or closure and postclosure care as a condition of the permit, and

Whereas said PRINCIPAL shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the PRINCIPAL shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amounts identified above for the facility,

Or, if the PRINCIPAL shall fund the standby trust fund in such amounts within fifteen days after an order to begin closure is issued by the DEPARTMENT or a state or other court of competent jurisdiction,

Or, if the PRINCIPAL shall provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33.1-24-05, as applicable, and obtain the DEPARTMENT'S written approval of such assurance within ninety days after the date of notice of cancellation is received by both the PRINCIPAL and the DEPARTMENT from the SURETY(IES), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The SURETY(IES) shall become liable on this bond obligation only when the PRINCIPAL has failed to fulfill the conditions described above. Upon notification by the DEPARTMENT that the PRINCIPAL has failed to perform as guaranteed by this bond, the SURETY(IES) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the DEPARTMENT.

The liability of the SURETY(IES) shall not be discharged by any payment or any succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the SURETY(IES) hereunder exceed the amount of said penal sum.

The SURETY(IES) may cancel the bond by sending notice of cancellation by certified mail to the PRINCIPAL and to the DEPARTMENT, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the PRINCIPAL and the DEPARTMENT as evidenced by the return receipts.

The PRINCIPAL may terminate this bond by sending written notice to the SURETY(IES) provided, however, that no such notice shall become effective until the SURETY(IES) receive(s) written authorization for termination of the bond by the DEPARTMENT.

[The following paragraph is an optional rider that may be included, but is not required]

The PRINCIPAL and SURETY(IES) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure or postclosure, or both, amount, provided that the penal sum does not increase by more than twenty percent in any one year, and no decrease in the penal sum takes place without the written permission of the DEPARTMENT.

In witness whereof, the PRINCIPAL and SURETY(IES) have executed this financial guarantee bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the PRINCIPAL and SURETY(IES) and that the wording of this surety bond is identical to the wording specified in subsection 2 of North Dakota Administrative Code section 33.1-24-05-81 as such rule was constituted on the date this bond was executed.

PRINCIPAL
[Signature(s)]
[Name(s)]
[Title(s)]

[Corporate seal]

CORPORATE SURETY(IES)

[Name and address]

State of Incorporation: _____

Liability limit: \$ _____

[Signature(s)]

[Name(s) and Title(s)]

[Corporate seal]

[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ _____

3. A surety bond guaranteeing performance of closure or postclosure care as specified in subsection 3 of section 33.1-24-05-77 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed: _____

Effective Date: _____

PRINCIPAL: [Legal name and business address of owner or operator]

Type of organization: [Insert "Individual", "joint venture", "partnership", or "corporation"]

State of incorporation: _____

SURETY(IES): [Name(s) and business address(es)]

Identification number, name, address and closure or postclosure, or both, amount(s) for each facility guaranteed by this bond.

[Indicate closure and postclosure amount separately]:

Total penal sum of bond: _____

Surety's bond number: _____

Know all persons by these presents, that we the PRINCIPAL and SURETY(IES) hereto are firmly bound to the North Dakota Department of Environmental Quality (hereinafter called the DEPARTMENT), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors and assigns jointly and severally: Provided that, where the SURETY(IES) are corporations acting as cosureties, we the SURETIES bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us and for all other purposes each SURETY binds itself jointly and severally with the PRINCIPAL for the payment of such sum only as is set forth opposite the name of each SURETY, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said PRINCIPAL is required under North Dakota Century Code chapter 23.1-04 to have a permit to own or operate each hazardous waste management facility identified above, and

Whereas said PRINCIPAL is required to provide financial assurance for closure, or closure and postclosure care as a condition of the permit, and

Whereas said PRINCIPAL shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are that if the PRINCIPAL shall faithfully perform closure, when required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended.

And if the PRINCIPAL shall faithfully perform postclosure care of each facility for which this bond guarantees postclosure care, in accordance with the postclosure plan and other requirements of the permit as such plan and permit may be amended pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the PRINCIPAL shall provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33.1-24-05 and obtain the DEPARTMENT'S written approval of such assurance within ninety days after the date notice of cancellation is received by both the PRINCIPAL and the DEPARTMENT from the SURETY(IES) then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The SURETY(IES) shall become liable on this bond obligation only when the PRINCIPAL has failed to fulfill the conditions described above.

Upon notification by the DEPARTMENT that the PRINCIPAL has been found in violation of the closure requirements of North Dakota Administrative Code chapter 33.1-24-05 for a facility for which this bond guarantees performance of closure, the SURETY(IES) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the DEPARTMENT.

Upon notification by the DEPARTMENT that the PRINCIPAL has been found in violation of the postclosure requirements of North Dakota Administrative Code chapter 33.1-24-05 for a facility for which this bond guarantees performance of postclosure care, the SURETY(IES) shall either perform postclosure care in accordance with the postclosure plan and other permit requirements or place the postclosure amount guaranteed for the facility into a standby trust fund as directed by the DEPARTMENT.

Upon notification by the DEPARTMENT that the PRINCIPAL has failed to provide alternate financial assurance as specified in North Dakota Administrative Code chapter 33.1-24-05 and obtain written approval of such assurance from the DEPARTMENT during the ninety days following receipt by both the PRINCIPAL and the DEPARTMENT of a notice of cancellation of the bond, the SURETY(IES) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the DEPARTMENT.

The SURETY(IES) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the SURETY(IES) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the SURETY(IES) hereunder exceed the amount of said penal sum.

The SURETY(IES) may cancel the bond by sending the notice of cancellation by certified mail to the PRINCIPAL and to the DEPARTMENT, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the PRINCIPAL and the DEPARTMENT as evidenced by the return receipts.

The PRINCIPAL may terminate this bond by sending written notice to the SURETY(IES) provided, however, that no such notice shall become effective until the SURETY(IES) receive(s) written authorization for termination of the bond by the DEPARTMENT.

[The following paragraph is an optional rider that may be included, but is not required].

PRINCIPAL and SURETY(IES) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure or postclosure, or both, amount, provided that the penal sum does not increase by more than twenty percent in any one year, and no decrease in the penal sum takes place without the written permission of the DEPARTMENT.

In Witness Whereof, the PRINCIPAL and SURETY(IES) have executed this performance bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the PRINCIPAL and the SURETY(IES) and that the wording of this surety bond is identical to the wording specified in subsection 3 of North Dakota Administrative Code section 33.1-24-05-81 as such rule was constituted on the date this bond was executed.

PRINCIPAL
[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

[CORPORATE SURETY(IES)]
[Name and Address]
State of Incorporation: _____
Liability Limit: \$ _____
[Signature(s)]
[Name(s) and Title(s)]
Corporate Seal:
[For every cosurety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond Premium: \$ _____

4. A letter of credit as specified in subsection 4 of section 33.1-24-05-77 must be worded as follows except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Director, North Dakota Department of Environmental Quality

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit Number _____ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] United States Dollars \$ _____, available upon presentation by you of

(1) You sight draft bearing reference to this letter of credit number _____, and

(2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of North Dakota Century Code chapter 23.1-04".

This letter of credit is effective as of [date] and shall expire on [date] at least one year later, but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subsection 4 of North Dakota Administrative Code section 33.1-24-05-81 as such rule was constituted on the date shown immediately below.

[Signature(s) and Title(s) of Official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce", or "the Uniform Commercial Code"]

5. A certificate of insurance as specified in subsection 5 of section 33.1-24-05-77 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATE OF INSURANCE FOR CLOSURE OR POSTCLOSURE CARE

Name and address of Insurer (hereinafter called the "INSURER"):

Name and address of Insured (hereinafter called the "INSURED"):

Facilities covered: [List for each facility: the identification number, name, address and amount of insurance for closure or the amount for postclosure care, or both. (These amounts for all facilities covered must cover the face amount shown below.)]

Face amount: _____

Policy Number: _____

Effective Date: _____

The INSURER hereby certifies that it has issued to the INSURED the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and postclosure care" or "postclosure care"] for the facilities identified above. The INSURER further warrants that such policy conforms in all respects with the requirements of subsection 5 of North Dakota Administrative Code section 33.1-24-05-77, as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such rules is hereby amended to eliminate such inconsistency.

Whenever requested by the North Dakota Department of Environmental Quality (DEPARTMENT) the INSURER agrees to furnish to the DEPARTMENT a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in subsection 5 of North Dakota Administrative Code section 33.1-24-05-81 as such rule was constituted on the date shown immediately below.

[Authorized signature for INSURER]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

[Date]

6. A letter from the chief financial officer, as specified in subsection 6 of section 33.1-24-05-77, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Letter from Chief Financial Officer

[Address to North Dakota Department of Environmental Quality].

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or postclosure costs, as specified in sections 33.1-24-05-74 through 33.1-24-05-88.

[Fill out the following five paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number, name, address, and current closure and/or postclosure cost estimates. Identify each cost estimate as to whether it is for closure or postclosure care].

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or postclosure care is demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88. The current closure and/or postclosure cost estimates covered by the test are shown for each facility: _____.

2. This firm guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88, the closure or postclosure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or postclosure care so guaranteed are shown for each facility: _____. The firm identified above is [insert one or

more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter].

3. In states where the environmental protection agency is not administering the financial requirements of subpart H of 40 CFR part 264 or 265, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or postclosure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88. The current closure and/or postclosure cost estimates covered by such a test are shown for each facility: _____.

4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, postclosure care, is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanism specified in sections 33.1-24-05-74 through 33.1-24-05-88 or equivalent or substantially equivalent state mechanisms. The current closure and/or postclosure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator of the following underground injective control facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a form 10K with the securities and exchange commission for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 6 of section 33.1-24-05-77 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 6 of section 33.1-24-05-77 are used.]

Alternative I

<u>1. Sum of current closure and postclosure cost estimate (total of all cost estimates shown in the five paragraphs above).</u>	\$ _____
<u>*2. Total liabilities (if any portion of the closure or postclosure cost estimate is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4).</u>	\$ _____
<u>*3. Tangible net worth.</u>	\$ _____
<u>*4. Net worth.</u>	\$ _____
<u>*5. Current assets.</u>	\$ _____
<u>*6. Current liabilities.</u>	\$ _____
<u>7. Net working capital (line 5 minus line 6).</u>	\$ _____

- *8. The sum of net income plus depreciation, depletion, and amortization. \$ _____
- *9. Total assets in United States (required only if less than 90% of firm's assets are located in the United States). \$ _____

- | | <u>Yes</u> | <u>No</u> |
|---|------------|-----------|
| 10. <u>Is line 3 at least \$10 million?</u> | _____ | _____ |
| 11. <u>Is line 3 at least 6 times line 1?</u> | _____ | _____ |
| 12. <u>Is line 7 at least 6 times line 1?</u> | _____ | _____ |
| *13. <u>Are at least 90% of firm's assets located in the United States? If not, complete line 14.</u> | _____ | _____ |
| 14. <u>Is line 9 at least 6 times line 1?</u> | _____ | _____ |
| 15. <u>Is line 2 divided by line 4 less than 2.0?</u> | _____ | _____ |
| 16. <u>Is line 8 divided by line 2 greater than 0.1?</u> | _____ | _____ |
| 17. <u>Is line 5 divided by line 6 greater than 1.5?</u> | _____ | _____ |

Alternative II

- 1. Sum of current closure and postclosure cost estimates (total of all cost estimates shown in the five paragraphs above). \$ _____
- 2. Current bond rating of most recent issuance of this firm and name of rating service. _____
- 3. Date of issuance of bond. _____
- 4. Date of maturity of bond. _____
- *5. Tangible net worth (if any portion of the closure and postclosure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line). \$ _____
- *6. Total assets in United States (required only if less than 90% of firm's assets are located in the United States). \$ _____

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 7. <u>Is line 5 at least \$10 million?</u> | _____ | _____ |
| 8. <u>Is line 5 at least 6 times line 1?</u> | _____ | _____ |
| *9. <u>Are at least 90% of firm's assets located in the United States? If not, complete line 10.</u> | _____ | _____ |
| 10. <u>Is line 6 at least 6 times line 1?</u> | _____ | _____ |

I hereby certify that the wording of this letter is identical to the wording specified in subsection 6 of section 33.1-24-05-81 as such regulations were constituted on the date shown immediately below.

[Signature] _____

[Name] _____

[Title] _____

[Date] _____

7. A letter from the chief financial officer, as specified in subsection 6 of section 33.1-24-05-79, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Letter from Chief Financial Officer:

[Address to North Dakota Department of Environmental Quality].

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or postclosure care" if applicable] as specified in sections 33.1-24-05-74 through 33.1-24-05-88.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number, name, and address.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88:

The firm identified above guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: _____ . The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____ ; or (3) engaged in the following substantial business relationship with the owner or operator _____ , and receiving the following value in consideration of this guarantee _____]. [Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and closure and postclosure care, fill in the following five paragraphs regarding facilities and associated closure and postclosure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its identification number, name, address, and current closure and/or postclosure cost estimates. Identify each cost estimate as to whether it is for closure or postclosure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or postclosure care or liability coverage is demonstrated through the financial test specified in sections 33.1-24-05-74 through 33.1-24-05-88. The current closure and postclosure cost estimates covered by the test are shown for each facility: _____ .

2. The firm identified above guarantees, through the guarantee specified in sections 33.1-24-05-74 through 33.1-24-05-88, the closure and postclosure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for closure or postclosure care so guaranteed are shown for each facility: _____ .

3. In states where the environmental protection agency is not administering the financial requirements of subpart H of 40 CFR parts 264 and 265, this firm is demonstrating financial assurance for the closure or postclosure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in subpart H of 40 CFR parts 264 and 265. The current closure or postclosure cost estimates covered by such a test are shown for each facility: _____.

4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, postclosure care, is not demonstrated to the DEPARTMENT through the financial test or any other financial assurance mechanisms specified in sections 33.1-24-05-74 through 33.1-24-05-88 or equivalent or substantially equivalent state mechanisms. The current closure and/or postclosure cost estimates not covered by such financial assurance are shown for each facility: _____.

5. This firm is the owner or operator or guarantor of the following underground injective control facilities for which financial assurance for plugging and abandonment is required under 40 CFR part 144 and is assured through a financial test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility: _____.

This firm [insert "is required" or "is not required"] to file a form 10K with the securities and exchange commission for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 6 of section 33.1-24-05-79 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 6 of section 33.1-24-05-79 are used.]

Alternative I

<u>1. Amount of annual aggregate liability coverage to be demonstrated.</u>	\$	_____
<u>*2. Current assets.</u>	\$	_____
<u>*3. Current liabilities.</u>	\$	_____
<u>4. Net working capital (line 2 minus line 3).</u>	\$	_____
<u>*5. Tangible net worth.</u>	\$	_____
<u>*6. If less than 90% of assets are located in the United States, give total United States assets.</u>	\$	_____
	<u>Yes</u>	<u>No</u>
<u>7. Is line 5 at least \$10 million?</u>	_____	_____
<u>8. Is line 4 at least 6 times line 1?</u>	_____	_____
<u>9. Is line 5 at least 6 times line 1?</u>	_____	_____
<u>*10. Are at least 90% of assets located in the United States? If not, complete line 11.</u>	_____	_____
<u>11. Is line 6 at least 6 times line 1?</u>	_____	_____

Alternative II

- 1. Amount of annual aggregate liability coverage to be demonstrated. \$ _____
- 2. Current bond rating of most recent issuance and name of rating service. _____
- 3. Date of issuance of bond. _____
- 4. Date of maturity of bond. _____
- *5. Tangible net worth. \$ _____
- *6. Total assets in United States (required only if less than 90% of assets are located in the United States). \$ _____

- | | <u>Yes</u> | <u>No</u> |
|--|------------|-----------|
| 7. <u>Is line 5 at least \$10 million?</u> | _____ | _____ |
| 8. <u>Is line 5 at least 6 times line 1?</u> | _____ | _____ |
| 9. <u>Are at least 90% of assets located in the United States? If not, complete line 10.</u> | _____ | _____ |
| 10. <u>Is line 6 at least 6 times line 1?</u> | _____ | _____ |

[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or postclosure care.]

Part B. Closure or Postclosure Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraph 1 of subdivision a of subsection 6 of section 33.1-24-05-77 and paragraph 1 of subdivision a of subsection 6 of section 33.1-24-05-79 are used. Fill in Alternative II if the criteria of paragraph 2 of subdivision a of subsection 6 of section 33.1-24-05-77 and paragraph 2 of subdivision a of subsection 6 of section 33.1-24-05-79 are used.]

Alternative I

- 1. Sum of current closure and postclosure cost estimates (total of all cost estimates listed above). \$ _____
- 2. Amount of annual aggregate liability coverage to be demonstrated. \$ _____
- 3. Sum of lines 1 and 2. \$ _____
- *4. Total liabilities (if any portion of your closure or postclosure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6). \$ _____
- *5. Tangible net worth. \$ _____
- *6. Net worth. \$ _____
- *7. Current assets. \$ _____
- *8. Current liabilities. \$ _____
- 9. Net working capital (line 7 minus line 8). \$ _____

*10. <u>The sum of net income plus depreciation, depletion, and amortization.</u>	\$		
*11. <u>Total assets in United States (required only if less than 90% of assets are located in the United States).</u>	\$		
		<u>Yes</u>	<u>No</u>
12. <u>Is line 5 at least \$10 million?</u>		_____	_____
13. <u>Is line 5 at least 6 times line 3?</u>		_____	_____
14. <u>Is line 9 at least 6 times line 3?</u>		_____	_____
*15. <u>Are at least 90% of assets located in the United States? If not, complete line 16.</u>		_____	_____
16. <u>Is line 11 at least 6 times line 3?</u>		_____	_____
17. <u>Is line 4 divided by line 6 less than 2.0?</u>		_____	_____
18. <u>Is line 10 divided by line 4 greater than 0.1?</u>		_____	_____
19. <u>Is line 7 divided by line 8 greater than 1.5?</u>		_____	_____

Alternative II

1. <u>Sum of current closure and postclosure cost estimates (total of all cost estimates listed above).</u>	\$		
2. <u>Amount of annual aggregate liability coverage to be demonstrated.</u>	\$		
3. <u>Sum of lines 1 and 2.</u>	\$		
4. <u>Current bond rating of most recent issuance and name of rating service.</u>		_____	_____
5. <u>Date of issuance of bond.</u>		_____	_____
6. <u>Date of maturity of bond.</u>		_____	_____
*7. <u>Tangible net worth (if any portion of the closure or postclosure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line).</u>	\$		
*8. <u>Total assets in the United States (required only if less than 90% of assets are located in the United States).</u>	\$		
		<u>Yes</u>	<u>No</u>
9. <u>Is line 7 at least \$10 million?</u>		_____	_____
10. <u>Is line 7 at least 6 times line 3?</u>		_____	_____
*11. <u>Are at least 90% of assets located in the United States? If not, complete line 12.</u>		_____	_____
12. <u>Is line 8 at least 6 times line 3?</u>		_____	_____

I hereby certify that the wording of this letter is identical to the wording specified in subsection 7 of section 33.1-24-05-81 as such regulations were constituted on the date shown immediately below.

[Signature] _____

[Name] _____

[Title] _____

[Date] _____

8. Corporate Guarantee

a. A corporate guarantee, as specified in subsection 6 of section 33.1-24-05-77, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Corporate Guarantee for Closure or Postclosure Care

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the state of [insert name of state], herein referred to as guarantor. This guarantee is made on behalf of the [owner or operator] of [business address], which is [one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in subsection 8 of section 33.1-24-05-75 to the DEPARTMENT.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsection 6 of section 33.1-24-05-77.

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: identification number, name, and address. Indicate for each whether guarantee is for closure, postclosure care, or both.]

3. "Closure plans" and "postclosure plans" as used below refer to the plans maintained as required by sections 33.1-24-05-59 through 33.1-24-05-73 for the closure and postclosure care of facilities as identified above.

4. For value received from [owner or operator], guarantor guarantees to the DEPARTMENT that in the event that [owner or operator] fails to perform [insert "closure", "postclosure care", or "closure and postclosure care"] of the above facility(ies) in accordance with the closure or postclosure plans and other permit or interim status requirements when required to do so, the guarantor shall do so or establish a trust fund as specified in sections 33.1-24-05-74 through 33.1-24-05-88, as applicable, in the name of [owner or operator] in the amount of the current closure or postclosure cost estimates as specified in sections 33.1-24-05-74 through 33.1-24-05-88.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety days, by certified mail, notice to the DEPARTMENT and to [owner or operator] that the guarantor intends to provide alternate financial assurance as specified in sections 33.1-24-05-74 through 33.1-24-05-88, as applicable, in the name of [owner or operator]. Within one hundred twenty days after

the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the DEPARTMENT by certified mail, of a voluntary or involuntary proceeding under title 11 (Bankruptcy), United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding.

7. Guarantor agrees that within thirty days after being notified by the DEPARTMENT of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor of closure or postclosure care, the guarantor shall establish alternate financial assurance as specified in sections 33.1-24-05-74 through 33.1-24-05-88, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.

8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or postclosure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or postclosure, or any other modification or alteration of an obligation of the owner or operator pursuant to sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819.

9. Guarantor agrees to remain bound under this guarantee for as long as [owner or operator] must comply with the applicable financial assurance requirements of sections 33.1-24-05-74 through 33.1-24-05-88 for the above-listed facilities, except as provided in paragraph 10 of this AGREEMENT.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the DEPARTMENT and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the DEPARTMENT approves, alternate closure and/or postclosure care coverage complying with section 33.1-24-05-77.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator.]

Guarantor may terminate this guarantee one hundred twenty days following the receipt of notification, through certified mail, by the DEPARTMENT and by [the owner or operator] obtains, and the DEPARTMENT approves, alternate closure or postclosure, or both, care coverage complying with section 33.1-24-05-77 or 33.1-24-05-78 or both.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator.]

Guarantor may terminate this guarantee one hundred twenty days following the receipt of notification, through certified mail, by the DEPARTMENT and by the [owner or operator].

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in sections 33.1-24-05-74 through 33.1-24-05-88, as applicable, and obtain written approval of such assurance from the DEPARTMENT within ninety days after a notice of cancellation by the guarantor is received by the DEPARTMENT from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].

12. Guarantor expressly waives notice of acceptance of this guarantee by the DEPARTMENT or by [owner or operator]. Guarantor also expressly waives notice of amendments or

modifications of the closure and/or postclosure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 8 of section 33.1-24-05-81 as such regulations were constituted on the date first above written.

Effective date: _____

[Name of guarantor] _____

[Authorized signature for guarantor] _____

[Name of person signing] _____

[Title of person signing] _____

Signature of witness or notary: _____

b. A guarantee, as specified in subsection 7 of section 33.1-24-05-79, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Guarantee for Liability Coverage

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the state of _____" and insert name of state; if incorporated outside the United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the state of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: "our subsidiary"; "a subsidiary of [name and address of common parent corporation], of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in subsection 8 of section 33.1-24-05-75", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

Recitals

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in subsection 7 of section 33.1-24-05-79.

2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: identification number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each state.] This corporate guarantee satisfies Resource Conservation Recovery Act third-party liability requirements for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.

3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based

on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage identified above.

4. Such obligation does not apply to any of the following:

(a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:

(A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert owner or operator];

(2) Premises that are sold, given away, or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert owner or operator];

(4) Personal property in the care, custody, or control of [insert owner or operator];

(5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.

5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within ninety days, by certified mail, notice to the DEPARTMENT and to [owner or operator] that the guarantor intends to provide alternate liability coverage as specified in section 33.1-24-05-79, as applicable, in the name of [owner or operator]. Within one hundred twenty days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the DEPARTMENT by certified mail of a voluntary or involuntary proceeding under title 11 (Bankruptcy), United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding.

7. Guarantor agrees that within thirty days after being notified by the DEPARTMENT of a determination that guarantor no longer meets the financial test criteria or that the guarantor is disallowed from continuing as a guarantor, the guarantor shall establish alternate liability coverage as specified in section 33.1-24-05-79 in the name of [owner or operator], unless [owner or operator] has done so.

8. Guarantor reserves the right to modify this AGREEMENT to take into account amendment or modification of the liability requirements set by section 33.1-24-05-79, provided that such modification shall become effective only if the DEPARTMENT does not disapprove the modification within thirty days of receipt of notification of the modification.

9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of section 33.1-24-05-79 for the above-listed facility(ies), except as provided in paragraph 10 of this AGREEMENT.

10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

Guarantor may terminate this guarantee by sending notice by certified mail to the DEPARTMENT and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the DEPARTMENT approves, alternate liability coverage complying with section 33.1-24-05-79.

[Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

Guarantor may terminate this guarantee one hundred twenty days following receipt of notification, through certified mail, by the DEPARTMENT and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.

12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.

13. The guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:

(a) Certification from the principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$ _____.

[Signatures] _____

Principal _____

(Notary) Date _____

[Signatures] _____

Claimant(s)
(Notary) Date

(b) A valid final court order establishing a judgment against the principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the principal's facility or group of facilities.

14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in subdivision b of subsection 8 of section 33.1-24-05-81 as such regulations were constituted on the date shown immediately below.

Effective date:
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

9. A hazardous waste facility liability endorsement as required in section 33.1-24-05-79 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under North Dakota Administrative Code section 33.1-24-05-79. The coverage applies at [list identification number, name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the insurer's liability] exclusive of legal defense costs.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy to which this endorsement is attached.

(b) The insurer is liable for the payment of amounts within any deductible applicable to this policy with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 6 of North Dakota Administrative Code section 33.1-24-05-79.

- (c) When requested by the North Dakota Department of Environmental Quality (DEPARTMENT), the insurer agrees to furnish to the DEPARTMENT a signed duplicate original of the policy and all endorsements.
- (d) Cancellation of this endorsement, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the DEPARTMENT.
- (e) Any other termination of this endorsement will be effective only upon written notice, and only after the expiration of thirty days after a copy of such written notice is received by the DEPARTMENT, as evidenced by the return receipt.

Attached to and forming part of policy number _____ issued by [name of insurer] herein called the insurer of [address of insurer] to [name of insured] of [address] this _____ day of _____, 20____. The effective date of said policy is _____ day of _____, 20____.

I hereby certify that the wording of this endorsement is identical to the wording specified in subsection 9 of North Dakota Administrative Code section 33.1-24-05-81, as such rule was constituted on the date first above written, and that the insurer is licensed to transact the business of insurance in the state of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of insurer]

[Type name]

[Title], authorized representative of [name of insurer]

[Address of representative]

10. A certificate of liability insurance as required in section 33.1-24-05-79 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. [Name of insurer, (the "insurer") of [address of insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under North Dakota Administrative Code section 33.1-24-05-79. The coverage applies at [list identification number, name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date] the effective date of said policy is [date].
2. The insurer further certifies the following with respect to the insurance described in paragraph 1:

- (a) Bankruptcy or insolvency of the insured shall not relieve the insurer of its obligations under the policy.
- (b) The insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in subsection 6 of North Dakota Administrative Code section 33.1-24-05-79.
- (c) When requested by the North Dakota Department of Environmental Quality (DEPARTMENT), the insurer agrees to furnish to the DEPARTMENT a signed duplicate original of the policy and all endorsements.
- (d) Cancellation of the insurance, whether by the insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice, and only after the expiration of sixty days after a copy of such written notice is received by the DEPARTMENT.
- (e) Any other termination of the insurance will be effective only upon written notice, and only after the expiration of thirty days after a copy of such written notice is received by the DEPARTMENT, as evidenced by the return receipt.

I hereby certify that the wording of this instrument is identical to the wording specified in subsection 7 of North Dakota Administrative Code section 33.1-24-05-81, as such regulation was constituted on the date first above written, and that the insurer is licensed to transact the business of insurance, in the state of North Dakota or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

[Signature of authorized representative of insurer]

[Type name]

[Title], authorized representative of [name of insurer]

[Address of representative]

11. A letter of credit, as specified in subsection 8 of section 33.1-24-05-79, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit
Name and Address of Issuing Institution
North Dakota Department of Environmental Quality

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ["any and all third-party liability claimants" or insert name of TRUSTEE of the standby trust fund], at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] United States dollars \$ _____ per occurrence and the annual aggregate amount of [in words] United States dollars \$ _____, for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] United States dollars \$ _____ per occurrence, and the annual aggregate amount of [in words] United States dollars \$ _____, for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this

letter of credit No. _____, and [insert the following language if the letter of credit is being used without a standby trust fund]: (1) a signed certificate reading as follows:

Certificate of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's], hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$[_____]. We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert principal];

(4) Personal property in the care, custody, or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures] _____

GRANTOR _____

[Signatures] _____

Claimant(s) _____

or (2) a valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR'S facility or group of facilities.

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify you, the DEPARTMENT, and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date.

When this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

[Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess"] coverage"].

We certify that the wording of this letter of credit is identical to the wording specified in subsection 11 of section 33.1-24-05-81 as such regulations were constituted on the date shown immediately below. [Signature(s) and title(s) of official(s) of issuing institution] [Date].

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits published and copyrighted by the International Chamber of Commerce" or "the Uniform Commercial Code"].

12. A surety bond, as specified in subsection 9 of section 33.1-24-05-79, must be worded as follows: except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PAYMENT BOND

Surety Bond No. [Insert number]

Parties [Insert name and address of owner or operator], principal, incorporated in [Insert state of incorporation] of [Insert city and state of principal place of business] and [Insert name and address of surety company(ies)], surety company(ies), of [Insert surety(ies) place of business].

Identification number, name, and address for each facility guaranteed by this bond:

	<u>Sudden Accidental Occurrences</u>	<u>Nonsudden Accidental Occurrences</u>
<u>Penal Sum Per Occurrence</u>	<u>[Insert Amount]</u>	<u>[Insert Amount]</u>
<u>Annual Aggregate</u>	<u>[Insert Amount]</u>	<u>[Insert Amount]</u>

Purpose: This is an AGREEMENT between the surety(ies) and the principal under which the surety(ies), its (their) successors and assignees, agree to be responsible for the payment of claims against the principal for bodily injury and/or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

- (1) Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.

_____ (2) Rules and regulations of the United States environmental protection agency (EPA), particularly 40 CFR ["264.147" or "265.147"] (if applicable).

_____ (3) Rules and regulations of the governing state agency [particularly section 33.1-24-05-79 and subsection 5 of section 33.1-24-06-16 of the North Dakota Administrative Code] (if applicable).

_____ Conditions:

_____ (1) The principal is subject to the applicable governing provisions that require the principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:

_____ (a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

_____ (b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or similar law.

_____ (c) Bodily injury to:

_____ (1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

_____ (2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:

_____ (A) Whether [insert principal] may be liable as an employer or in any other capacity; and

_____ (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

_____ (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

_____ (e) Property damage to:

_____ (1) Any property owned, rented, or occupied by [insert principal];

_____ (2) Premises that are sold, given away, or abandoned by [insert principal] if the property damage arises out of any part of those premises;

_____ (3) Property loaned to [insert principal];

_____ (4) Personal property in the care, custody, or control of [insert principal];

_____ (5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

_____ (2) This bond assures that the principal will satisfy valid third-party liability claims, as described in condition 1.

_____ (3) If the principal fails to satisfy a valid third-party liability claim, as described above, the surety(ies) becomes liable on this bond obligation.

_____ (4) The surety(ies) shall satisfy a third-party liability claim only upon the receipt of one of the following documents:

_____ (a) Certification from the principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

_____ The undersigned, as parties [insert name of principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$ [_____].

[Signature]

Principal

[Notary] [Date]

[Signature(s)]

Claimant(s)

[Notary] [Date]

_____ or (b) A valid final court order establishing a judgment against the principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the principal's facility or group of facilities.

_____ (5) In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert "primary" or "excess"] coverage.

_____ (6) The liability of the surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the surety(ies) furnish(es) notice to the DEPARTMENT forthwith of all claims filed and payments made by the surety(ies) under this bond.

_____ (7) The surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the principal and the DEPARTMENT provided, however, the cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by the principal and the DEPARTMENT, as evidenced by the return receipt.

_____ (8) The principal may terminate this bond by sending written notice to the surety(ies) and to the DEPARTMENT.

_____ (9) The surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

_____ (10) This bond is effective from [insert date] (12:01 a.m., standard time, at the address of the principal as stated herein) and shall continue in force until terminated as described above.

_____ In Witness Whereof, the principal and surety(ies) have executed this bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the principal and surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection 12 of section 33.1-24-05-81, as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

CORPORATE SURETY(IES)

State of incorporation: _____

Liability limit: \$ _____

[Signature(s)]

[Name(s) and title(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for surety above.]

Bond premium: \$ _____

13. TRUST AGREEMENT

a. A TRUST AGREEMENT, as specified in subsection 10 of section 33.1-24-05-79, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

TRUST AGREEMENT, the "AGREEMENT", entered into as of [date] by and between [name of the owner or operator] a [name of state] [insert "corporation", "partnership", "association", or "proprietorship"], the "GRANTOR", and [name of corporate TRUSTEE], [insert, "incorporated in the state of _____" or "a national bank"], the "TRUSTEE".

Whereas, the North Dakota Department of Environmental Quality (DEPARTMENT) has established certain regulations applicable to the GRANTOR, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the GRANTOR has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the GRANTOR, acting through its duly authorized officers, has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT, and the TRUSTEE is willing to act as TRUSTEE.

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

(a) The term "GRANTOR" means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.

_____ (b) The term "TRUSTEE" means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities. This AGREEMENT pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the identification number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a trust fund, hereinafter the "FUND", for the benefit of any and all third parties injured or damaged by [sudden or nonsudden, or both] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amount of _____ [up to \$1 million] per occurrence and _____ [up to \$2 million] annual aggregate for sudden accidental occurrences and _____ [up to \$3 million] per occurrence and _____ [up to \$6 million] annual aggregate for nonsudden occurrences, except that the FUND is not established for the benefit of third parties for the following:

_____ (a) Bodily injury or property damage for which [insert GRANTOR] is obligated to pay damages by reason of the assumption of liability in a contract or AGREEMENT. This exclusion does not apply to liability for damages that [insert GRANTOR] would be obligated to pay in the absence of the contract or AGREEMENT.

_____ (b) Any obligation of [insert GRANTOR] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

_____ (c) Bodily injury to:

_____ (1) An employee of [insert GRANTOR] arising from, and in the course of, employment by [insert GRANTOR]; or

_____ (2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert GRANTOR].

_____ This exclusion applies:

_____ (A) Whether [insert GRANTOR] may be liable as an employer or in any other capacity; and

_____ (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

_____ (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

_____ (e) Property damage to:

_____ (1) Any property owned, rented, or occupied by [insert GRANTOR];

_____ (2) Premises that are sold, given away, or abandoned by [insert GRANTOR] if the property damage arises out of any part of those premises;

_____ (3) Property loaned to [insert GRANTOR];

_____ (4) Personal property in the care, custody, or control of [insert GRANTOR];

_____ (5) That particular part of real property on which [insert GRANTOR] or any contractors or subcontractors working directly or indirectly on behalf of [insert GRANTOR] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the FUND shall be considered [insert "primary" or "excess"] coverage.

The FUND is established initially as consisting of the property, which is acceptable to the TRUSTEE, described in schedule B attached hereto. Such property and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND shall be held by the TRUSTEE, IN TRUST, as hereinafter provided. The TRUSTEE shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR, any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payment for Bodily Injury or Property Damage. The TRUSTEE shall satisfy a third-party liability claim by making payments from the FUND only upon receipt of one of the following documents:

(a) Certification from the GRANTOR and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert GRANTOR] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [GRANTOR'S] hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$[_____].

[Signatures]

Grantor

[Signatures]

Claimant(s)

(b) A valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR'S facility or group of facilities.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND shall consist of cash or securities acceptable to the TRUSTEE.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the trustee's duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the GRANTOR, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), may not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(ii) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or a state government; and

(iii) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the FUND to any common commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without in any way limiting the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE shall at all times show that all such securities are part of the FUND;

(d) To deposit any cash in the FUND in interest-bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate corporate capacity, or in any other banking institution affiliated with the TRUSTEE, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the FUND.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this trust, including fees for legal services rendered to the TRUSTEE, the

compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements of the TRUSTEE shall be paid from the FUND.

Section 10. Annual Valuations. The TRUSTEE shall annually, at least thirty days prior to the anniversary date of establishment of the FUND, furnish to the GRANTOR and to the DEPARTMENT a statement confirming the value of the trust. Any securities in the FUND shall be valued at market value as of no more than sixty days prior to the anniversary date of establishment of the FUND. The failure of the GRANTOR to object in writing to the TRUSTEE within ninety days after the statement has been furnished to the GRANTOR and the DEPARTMENT shall constitute a conclusively binding assent by the GRANTOR barring the GRANTOR from asserting any claim or liability against the TRUSTEE with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR with respect to any question arising as to the construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. TRUSTEE Compensation. The TRUSTEE shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 13. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement shall not be effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE'S acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the trust in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. Instructions to the TRUSTEE. All orders, requests, and instructions by the GRANTOR to the TRUSTEE shall be in writing, signed by such persons as are designated in the attached exhibit A or such other designees as the GRANTOR may designate by amendments to exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR'S orders, requests, and instructions. All orders, requests, and instructions by the DEPARTMENT to the TRUSTEE shall be in writing, signed by the DEPARTMENT, or its designees, and the TRUSTEE shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR and/or the department, except as provided for herein.

Section 15. Notice of Nonpayment. If a payment for bodily injury or property damage is made under Section 4 of this trust, the TRUSTEE shall notify the GRANTOR of such payment and the amount(s) thereof within five working days. The GRANTOR shall, on or before the anniversary date of the establishment of the FUND following such notice, either make payments to the TRUSTEE in amounts sufficient to cause the trust to return to its value immediately prior to the

payment of claims under Section 4, or shall provide written proof to the TRUSTEE that other financial assurance for liability coverage has been obtained equaling the amount necessary to return the trust to its value prior to the payment of claims. If the GRANTOR does not either make payments to the TRUSTEE or provide the TRUSTEE with such proof, the TRUSTEE shall within ten working days after the anniversary date of the establishment of the FUND provide a written notice of nonpayment to the DEPARTMENT.

Section 16. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE, and the appropriate DEPARTMENT administrator if the GRANTOR ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in Section 16, this trust shall be irrevocable and shall continue until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE, and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be delivered to the GRANTOR.

The DEPARTMENT will agree to termination of the trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. Immunity and Indemnification. The TRUSTEE shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the GRANTOR or the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE shall be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 19. Choice of Law. This AGREEMENT shall be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 20. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT shall not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subsection 13 of section 33.1-24-05-81, as such regulations were constituted on the date first above written.

[Signature of GRANTOR]

[Title]

Attest:

[Title]

[Seal]

[Signature of TRUSTEE]

Attest:

[Title]

[Seal]

b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a trust fund as specified in subsection 10 of section 33.1-24-05-79.

State of _____
County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

14. Standby TRUST AGREEMENT

a. A standby TRUST AGREEMENT, as specified in subsection 8 of section 33.1-24-05-79, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Standby TRUST AGREEMENT

TRUST AGREEMENT, the "AGREEMENT", entered into as of [date] by and between [name of the owner or operator] a [name of a state] [insert "corporation", "partnership", "association", or "proprietorship"], the "GRANTOR", and [name of corporate TRUSTEE], [insert, "incorporated in the state of _____" or "a national bank"], the "TRUSTEE".

Whereas the North Dakota Department of Environmental Quality has established certain regulations applicable to the GRANTOR, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the GRANTOR has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the GRANTOR, acting through its duly authorized officers, has selected the TRUSTEE to be the TRUSTEE under this AGREEMENT, and the TRUSTEE is willing to act as TRUSTEE.

Now, therefore, the GRANTOR and the TRUSTEE agree as follows:

Section 1. Definitions. As used in this AGREEMENT:

(a) The term "GRANTOR" means the owner or operator who enters into this AGREEMENT and any successors or assigns of the GRANTOR.

(b) The term "TRUSTEE" means the TRUSTEE who enters into this AGREEMENT and any successor TRUSTEE.

Section 2. Identification of Facilities. This AGREEMENT pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the identification number, name, and

address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this AGREEMENT].

Section 3. Establishment of FUND. The GRANTOR and the TRUSTEE hereby establish a standby trust fund, hereafter the "FUND", for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ [up to \$1 million] per occurrence and _____ [up to \$2 million] annual aggregate for sudden accidental occurrences and _____ [up to \$3 million] per occurrence and _____ [up to \$6 million] annual aggregate for nonsudden occurrences, except that the FUND is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert GRANTOR] is obligated to pay damages by reason of the assumption of liability in a contract or AGREEMENT. This exclusion does not apply to liability for damages that [insert GRANTOR] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert GRANTOR] under a workers' compensation, disability benefits, or unemployment compensation law, or any similar law.

(c) Bodily injury to:

(1) An employee [insert GRANTOR] arising from, and in the course of, employment by [insert GRANTOR]; or

(2) The spouse, child, parent, brother, or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert GRANTOR].

This exclusion applies:

(A) Whether [insert GRANTOR] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert GRANTOR];

(2) Premises that are sold, given away, or abandoned by [insert GRANTOR] if the property damage arises out of any part of those premises;

(3) Property loaned by [insert GRANTOR];

(4) Personal property in the care, custody, or control of [insert GRANTOR];

(5) That particular part of real property on which [insert GRANTOR] or any contractors or subcontractors working directly or indirectly on behalf of [insert GRANTOR] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the FUND shall be considered [insert "primary" or "excess"] coverage.

The FUND is established initially as consisting of the proceeds of the letter of credit deposited into the FUND. Such proceeds and any other property subsequently transferred to the TRUSTEE is referred to as the FUND, together with all earnings and profits thereon, less any payments or distributions made by the TRUSTEE pursuant to this AGREEMENT. The FUND shall be held by the TRUSTEE, IN TRUST, as hereinafter provided. The TRUSTEE shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the GRANTOR, any payments necessary to discharge any liabilities of the GRANTOR established by the DEPARTMENT.

Section 4. Payment for Bodily Injury or Property Damage. The TRUSTEE shall satisfy a third-party liability claim by drawing on the letter of credit described in schedule B and by making payments from the FUND only upon receipt of one of the following documents:

(a) Certification from the GRANTOR and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert GRANTOR] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [GRANTOR'S] hazardous waste treatment, storage, or disposal facility should be paid in the amount of \$[_____].

[Signatures] _____

Grantor _____

[Signatures] _____

Claimant(s) _____

(b) A valid final court order establishing a judgment against the GRANTOR for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the GRANTOR'S facility or group of facilities.

Section 5. Payments Comprising the FUND. Payments made to the TRUSTEE for the FUND shall consist of the proceeds from the letter of credit drawn upon by the TRUSTEE in accordance with the requirements of subsection 11 of section 33.1-24-05-81 and Section 4 of this AGREEMENT.

Section 6. TRUSTEE Management. The TRUSTEE shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the GRANTOR may communicate in writing to the TRUSTEE from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the FUND, the TRUSTEE shall discharge the trustee's duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the GRANTOR, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

- (ii) The TRUSTEE is authorized to invest the FUND in time or demand deposits of the TRUSTEE, to the extent insured by an agency of the federal or a state government; and
- (iii) The TRUSTEE is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The TRUSTEE is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the FUND to any common, commingled, or collective trust fund created by the TRUSTEE in which the FUND is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the TRUSTEE. The TRUSTEE may vote such shares in its discretion.

Section 8. Express Powers of TRUSTEE. Without in any way limiting the powers and discretions conferred upon the TRUSTEE by the other provisions of this AGREEMENT or by law, the TRUSTEE is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the TRUSTEE shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the FUND in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the TRUSTEE in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the TRUSTEE shall at all times show that all such securities are part of the FUND;
- (d) To deposit any cash in the FUND in interest-bearing accounts maintained or savings certificates issued by the TRUSTEE, in its separate corporate capacity, or in any other banking institution affiliated with the TRUSTEE, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the FUND.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the FUND and all brokerage commissions incurred by the FUND shall be paid from the FUND. All other expenses incurred by the TRUSTEE in connection with the administration of this trust, including fees for legal services rendered to the TRUSTEE, the

compensation of the TRUSTEE to the extent not paid directly by the GRANTOR, and all other proper charges and disbursements to the TRUSTEE shall be paid from the FUND.

Section 10. Advice of Counsel. The TRUSTEE may from time to time consult with counsel, who may be counsel to the GRANTOR, with respect to any question arising as to the construction of this AGREEMENT or any action to be taken hereunder. The TRUSTEE shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. TRUSTEE Compensation. The TRUSTEE shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the GRANTOR.

Section 12. Successor TRUSTEE. The TRUSTEE may resign or the GRANTOR may replace the TRUSTEE, but such resignation or replacement shall not be effective until the GRANTOR has appointed a successor TRUSTEE and this successor accepts the appointment. The successor TRUSTEE shall have the same powers and duties as those conferred upon the TRUSTEE hereunder. Upon the successor TRUSTEE'S acceptance of the appointment, the TRUSTEE shall assign, transfer, and pay over to the successor TRUSTEE the funds and properties then constituting the FUND. If for any reason the GRANTOR cannot or does not act in the event of the resignation of the TRUSTEE, the TRUSTEE may apply to a court of competent jurisdiction for the appointment of a successor TRUSTEE or for instructions. The successor TRUSTEE shall specify the date on which it assumes administration of the trust in a writing sent to the GRANTOR, the DEPARTMENT, and the present TRUSTEE by certified mail ten days before such change becomes effective. Any expenses incurred by the TRUSTEE as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 13. Instructions to the TRUSTEE. All orders, requests, certifications of valid claims, and instructions to the TRUSTEE shall be in writing, signed by such persons as are designated in the attached exhibit A, or such other designees as the GRANTOR may designate by amendments to exhibit A. The TRUSTEE shall be fully protected in acting without inquiry in accordance with the GRANTOR'S orders, requests, and instructions. The TRUSTEE shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the GRANTOR or the DEPARTMENT hereunder has occurred. The TRUSTEE shall have no duty to act in the absence of such orders, requests, and instructions from the GRANTOR and/or the DEPARTMENT, except as provided for herein.

Section 14. Amendment of AGREEMENT. This AGREEMENT may be amended by an instrument in writing executed by the GRANTOR, the TRUSTEE and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT if the GRANTOR ceases to exist.

Section 15. Irrevocability and Termination. Subject to the right of the parties to amend this AGREEMENT as provided in Section 14, this trust shall be irrevocable and shall continue until terminated at the written AGREEMENT of the GRANTOR, the TRUSTEE, and the DEPARTMENT, or by the TRUSTEE and the DEPARTMENT, if the GRANTOR ceases to exist. Upon termination of the trust, all remaining trust property, less final trust administration expenses, shall be paid to the GRANTOR.

The DEPARTMENT will agree to termination of the trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. Immunity and Indemnification. The TRUSTEE shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the GRANTOR and the DEPARTMENT issued in accordance with this AGREEMENT. The TRUSTEE shall be indemnified and saved harmless by the GRANTOR or from the trust fund, or both, from and against any personal liability to which

the TRUSTEE may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the GRANTOR fails to provide such defense.

Section 17. Choice of Law. This AGREEMENT shall be administered, construed, and enforced according to the laws of the state of North Dakota.

Section 18. Interpretation. As used in this AGREEMENT, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this AGREEMENT shall not affect the interpretation or the legal efficacy of this AGREEMENT.

In Witness Whereof the parties have caused this AGREEMENT to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this AGREEMENT is identical to the wording specified in subsection 14 of section 33.1-24-05-81 as such regulations were constituted on the date first above written.

[Signature of GRANTOR]

[Title]

Attest:

[Title]

[Seal]

[Signature of TRUSTEE]

Attest:

[Title]

[Seal]

b. The following is an example of the certification of acknowledgment which must accompany the TRUST AGREEMENT for a standby trust fund as specified in subsection 8 of section 33.1-24-05-79. State requirements may differ on the proper content of this acknowledgment.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of notary public]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-82. [Reserved]

33.1-24-05-83. [Reserved]

33.1-24-05-84. [Reserved]

33.1-24-05-85. [Reserved]

33.1-24-05-86. [Reserved]

33.1-24-05-87. [Reserved]

33.1-24-05-88. [Reserved]

33.1-24-05-89. Applicability of requirements for use and management of containers.

Sections 33.1-24-05-89 through 33.1-24-05-102 apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as section 33.1-24-05-01 provides otherwise.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-90. Condition of containers.

If a container holding hazardous waste is not in good condition (for example, severe rusting, apparent structural defects) or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-525, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-91. Compatibility of waste with containers.

The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-92. Management of containers.

1. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
2. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-93. Inspections.

At least weekly, the owner or operator shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. A logbook of these weekly inspections must be maintained.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-94. Containment.

1. Container storage areas must have a containment system that is designed and operated in accordance with subsection 2, except as provided otherwise in subsection 3.

2. The containment system must be designed and operated as follows:

a. A base must underlie the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

b. The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.

c. The containment system must have sufficient capacity to contain ten percent of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquid need not be considered in this determination.

d. Run-on into the containment system must be prevented, unless the collection system has sufficient excess capacity in addition to that required in subdivision c to contain any run-on which might enter the system.

e. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

3. Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by subsection 2, except as provided by subsection 4 or provided that:

a. The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or

b. The containers are elevated or are otherwise protected from contact with accumulated liquid.

4. Storage areas that store containers holding the wastes listed below that do not contain free liquids must have a containment system defined by subsection 2:

a. F020, F021, F022, F023, F026, and F027.

b. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-95. Special requirements for ignitable or reactive wastes.

Containers holding ignitable or reactive waste must be located at least fifteen meters [50 feet] from the facility's property line.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-96. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials, may not be placed in the same container, unless subsection 2 of section 33.1-24-05-08 is complied with.
2. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
3. A storage container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-97. Closure.

At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-98. Air emission standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the requirements of sections 33.1-24-05-400 through 33.1-24-05-474.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-99. [Reserved]

33.1-24-05-100. [Reserved]

33.1-24-05-101. [Reserved]

33.1-24-05-102. [Reserved]

33.1-24-05-103. Applicability of tank requirements.

The requirements of sections 33.1-24-05-103 through 33.1-24-05-117 apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in subsections 1, 2, and 3 or in section 33.1-24-05-01.

1. Tank systems that are used to treat or store hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in section 33.1-24-05-106. To demonstrate the absence or presence of free liquids in the stored, treated, or both waste, the following test must be used: method 9095B (paint filter liquids test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05.
2. Tank systems, including sumps, as defined in section 33.1-24-01-04, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in subsection 1 of section 33.1-24-05-106.
3. Tanks, sumps, and other such collection devices or systems used in conjunction with drip pads, as defined in section 33.1-24-01-04 and regulated under sections 33.1-24-05-501 through 33.1-24-05-524, must meet the requirements of sections 33.1-24-05-103 through 33.1-24-05-117.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-104. Assessment of existing tank system's integrity.

1. For each existing tank system that does not have secondary containment meeting the requirements of section 33.1-24-05-106, the owner or operator shall determine that the tank system is not leaking or is unfit for use. Except as provided in subsection 3, the owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified professional engineer, in accordance with subsection 4 of section 33.1-24-06-03, that attests to the tank system's integrity by January 12, 1988.
2. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the wastes to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, the assessment must consider of the following:
 - a. Design standards, if available, according to which the tank and ancillary equipment were constructed;
 - b. Hazardous characteristics of the wastes that have been and will be handled;
 - c. Existing corrosion protection measures;
 - d. Documented age of the tank system if available (otherwise, an estimate of the age); and
 - e. Results of a leak test, internal inspection, or other tank integrity examination such that:
 - (1) For nonenterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects; and
 - (2) For other than nonenterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity

examination that is certified by a qualified professional engineer in accordance with subsection 4 of section 33.1-24-06-03, that addresses cracks, leaks, corrosion, and erosion.

[Note: The practices described in the American petroleum institute publication, guide for inspection of refinery equipment, chapter XIII, "Atmospheric and Low-Pressure Storage Tanks", fourth edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.]

3. Tank systems that store or treat materials that become hazardous waste subsequent to July 14, 1986, must conduct this assessment within twelve months after the date that the waste becomes a hazardous waste.

4. If, as a result of the assessment conducted in accordance with subsection 1, a tank system is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of section 33.1-24-05-109.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-105. Design and installation of new tank systems or components.

1. Owners or operators of new tank systems or components shall obtain and submit to the department, at time of submittal of part B application information, a written assessment, reviewed and certified by a qualified professional engineer, in accordance with subsection 4 of section 33.1-24-06-03, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the wastes to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the department to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

a. Design standards according to which tanks or the ancillary equipment, or both, are constructed;

b. Hazardous characteristics of the waste to be handled;

c. For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:

(1) Factors affecting the potential for corrosion including, but not limited to:

(a) Soil moisture content;

(b) Soil pH;

(c) Soil sulfides level;

(d) Soil resistivity;

(e) Structure to soil potential;

(f) Influence of nearby underground metal structures (for example, piping);

(g) Existence of stray electric current; and

(h) Existing corrosion protecting measures (for example, coating, cathodic protection); and

(2) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:

(a) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, etc.;

(b) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (for example, impressed current or sacrificial anodes);

(c) Electrical isolation devices such as insulating joints and flanges;

[Note: The practices described in the national association of corrosion engineers standard, "Recommended Practice (RP-02-85) Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems", and the American petroleum institute publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems", may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

(d) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(e) Design considerations to ensure that:

[1] Tank foundations will maintain the load of a full tank;

[2] Tank systems will be anchored to prevent floatation or dislodgment where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of subsection 1 of section 33.1-24-05-09; and

[3] Tank systems will withstand the effects of frost heave.

2. The owner or operator of a new tank system shall ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or a qualified professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, shall inspect the system for the presence of any of the following items:

a. Weld breaks;

b. Punctures;

c. Scrapes of protective coating;

d. Cracks;

e. Corrosion; and

f. Other structural damage or inadequate construction or installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

3. New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is of a noncorrosive, porous, homogenous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

4. All new tanks and ancillary equipment must be tested for tightness prior to being covered, enclosed, or placed into use. If a tank system is found not to be tight, all repairs necessary to remedy the leaks in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

5. Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

[Note: The piping system installation procedures described in American petroleum institute publication 1615 (November 1979), "Installation of Underground Petroleum Storage Systems", or American national standards institute standard B31.3 "Petroleum Refinery Piping" and American national standards institute standard B31.4, "Liquid Petroleum Transportation Piping System", may be used where applicable, as guidelines for proper installation of piping systems.]

6. The owner or operator shall provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on information provided under subdivision c of subsection 1 or other corrosion protection if the department believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. Installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

7. The owner or operator shall obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of subsections 2 through 6, attesting that the tank system was properly designed and installed and that repairs, pursuant to subsections 2 and 4 were performed. These written statements must also include the certification statement as required in subsection 4 of section 33.1-24-06-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-106. Containment and detection of releases.

1. In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in subsections 6 and 7):

a. For all new and existing tank systems or components, prior to their being put into service.

b. For tank systems that store or treat materials that become hazardous wastes, within two years of the hazardous waste listing, or when the tank system has reached fifteen years of age, whichever comes later.

2. Secondary containment systems must be:

a. Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

b. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

3. To meet the requirements of subsection 2, secondary containment systems must be at a minimum:

a. Constructed of or lined with materials that are compatible with the waste or wastes to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, stress of installation, and the stress of daily operation (including stresses from nearby vehicular traffic);

b. Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

c. Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours, or at the earliest practicable time if the owner or operator can demonstrate to the department that the existing detection technologies or site conditions will not allow detection of a release within twenty-four hours; and

d. Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within twenty-four hours, or in as timely a manner as possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the department that removal of the released waste or accumulated precipitation cannot be accomplished within twenty-four hours. (Note: If the collected material is a hazardous waste under chapter 33.1-24-02, it is subject to management as a hazardous waste in accordance with all applicable requirements of chapters 33.1-24-03 through 33.1-24-05. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a publicly owned treatment works, it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR part 302.)

4. Secondary containment for tanks must include one or more of the following devices:

a. A liner (external to the tank);

b. A vault;

c. A double-walled tank; or

d. An equivalent device as approved by the department.

5. In addition to the requirements of subsections 2, 3, and 4, secondary containment systems must satisfy the following requirements:

a. External liner systems must be:

- (1) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;
- (2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;
- (3) Free of cracks or gaps; and
- (4) Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tanks (for example, capable of preventing lateral as well as vertical migration of the waste).

b. Vault systems must be:

- (1) Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary;
- (2) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a twenty-five-year, twenty-four-hour rainfall event;
- (3) Constructed with chemical-resistant water stops in place at all joints (if any);
- (4) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;
- (5) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:
 - (a) Meets the definition of ignitable wastes under section 33.1-24-02-11; or
 - (b) Meets the definition of reactive wastes under section 33.1-24-02-13, and may form an ignitable or explosive vapor; and
- (6) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

c. Double-walled tanks must be:

- (1) Designed as an integral structure (for example, an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;
- (2) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and
- (3) Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four hours, or at the earliest practical time if the owner or operator can demonstrate to the department, and the department concludes, that the existing detection technology or site conditions would not allow detection with a release within twenty-four hours. (Note: The provisions outlined in the steel tank

institute's "standard for dual wall underground steel storage tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.)

6. Ancillary equipment must be provided with secondary containment (for example, trench, jacketing, double-walled piping) that meets the requirements of subsections 2 and 3 except for:

- a. Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;
- b. Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis;
- c. Sealless or magnetic coupling pumps, and sealless valves, that are visually inspected for leaks on a daily basis; and
- d. Pressurized aboveground piping systems with automatic shutoff devices (for example, excess flow check valves, flow metering shutdown devices, loss of pressure actuated shutoff devices) that are visually inspected for leaks on a daily basis.

7. The owner or operator may obtain a variance from the requirements of this section if the department finds, as a result of a demonstration by the owner or operator that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituent into the ground water; or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with subdivision b, be exempted from secondary containment requirements of this section.

a. In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the department will consider:

- (1) The nature and quantity of the wastes;
- (2) The proposed alternate design and operation;
- (3) The hydrogeologic setting of the facility, including the thickness of soils present between the tank system and ground water; and
- (4) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

b. In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the department will consider:

- (1) The potential adverse effects on ground water, surface water, and land quality taking into account:
 - (a) The physical and chemical characteristics of the waste in the tank system, including its potential for migration;
 - (b) The hydrogeological characteristics of the facility and surrounding land;
 - (c) The potential for health risks caused by human exposure to waste constituents;
 - (d) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

- (e) The persistence and permanence of potential adverse effects;
 - (2) The potential adverse effects of a release on ground water quality, taking into account:
 - (a) The quantity and quality of ground water and the direction of ground water flow;
 - (b) The proximity and withdrawal rates of ground water users;
 - (c) The current and future uses of ground water in the area; and
 - (d) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water quality;
 - (3) The potential adverse effects of a release on surface water quality, taking into account:
 - (a) The quantity and quality of ground water and the direction of ground water flow;
 - (b) The patterns of rainfall in the region;
 - (c) The proximity of the tank system to surface waters;
 - (d) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and
 - (e) The existing quality of surface water, including other sources of contamination and cumulative impact on surface water quality; and
 - (4) The potential adverse effects of a release on the land surrounding the tank system, taking into account:
 - (a) The patterns of rainfall in the region; and
 - (b) The current and future uses of the surrounding land.
 - c. The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of subdivision a, at which a release of hazardous waste has occurred from the primary tank system, but has not migrated beyond the zone of engineering control (as established in the variance), must:
 - (1) Comply with the requirements of section 33.1-24-05-109, except subsection 4; and
 - (2) Decontaminate or remove contaminated soil to the extent necessary to:
 - (a) Enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had prior to the release; and
 - (b) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and
 - (3) If contaminated soil cannot be removed or decontaminated in accordance with paragraph 2, comply with the requirements of subsection 2 of section 33.1-24-05-110.
 - d. The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of subdivision a, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), shall:

(1) Comply with the requirements of subsections 1, 2, 3, and 4 of section 33.1-24-05-109;

(2) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if ground water has been contaminated, the owner or operator shall comply with the requirements of subsection 2 of section 33.1-24-05-110;

(3) If repairing, replacing, or reinstalling the tank system, provides secondary containment in accordance with the requirements of subsections 1 through 6 or reapply for a variance from the secondary containment and meet the requirements for new tank systems in section 33.1-24-05-105 if the tank system is replaced. The owner or operator shall comply with these requirements even if contaminated soil can be decontaminated or removed and ground water or surface water has not been contaminated.

8. The following procedures must be followed in order to request a variance from secondary containment:

a. The department must be notified in writing by the owner or operator that the owner or operator intends to conduct and submit a demonstration for a variance from secondary containment as allowed in subsection 7 according to the following schedule:

(1) For existing tank systems, at least twenty-four months prior to the date that secondary containment must be provided in accordance with subsection 1.

(2) For new tank systems, at least thirty days prior to entering into a contract for installation.

b. As part of the notification, the owner or operator shall also submit to the department a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in subdivision a or b of subsection 7;

c. The demonstration for a variance must be completed within one hundred eighty days after notifying the department of an intent to conduct the demonstration; and

d. If the department intends to grant a variance under this section:

(1) The department will inform the public, through a newspaper notice, of the availability of the demonstration for a variance. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least thirty days from the date of the notice for the public to review and comment on the demonstration for a variance. The department also will hold a public hearing, in response to a request or at the department's discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least thirty days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.

(2) The department will approve or disapprove the request for a variance within ninety days of receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the ninety-day time period will

begin when the department receives a complete demonstration, including all information necessary to make a final determination. If the public comment period is extended, the ninety-day time period will be similarly extended.

(3) If a variance is approved, the department will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.

9. All tank systems, until such time as secondary containment that meets the requirements of this section is provided, must comply with the following:

a. For nonenterable underground tanks, a leak test that meets the requirements of subdivision e of subsection 2 of section 33.1-24-05-104 must be conducted at least annually.

b. For other than nonenterable underground tanks, the owner or operator shall either conduct a leak test as in subdivision a or develop a schedule and procedure for an assessment of the overall condition of the tank system by a qualified professional engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator shall remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

c. For ancillary equipment, a leak test or other integrity assessment as approved by the department must be conducted by a qualified professional engineer at least annually.

[Note: The practices described in the American petroleum institute publication guide for inspection of refinery equipment, chapter XIII, "Atmospheric and Low-Pressure Storage Tanks", fourth edition 1981, may be used, where applicable, as guidelines for assessing the overall condition of the tank system.]

d. The owner or operator shall maintain on file at the facility a record of the results of the assessments conducted in accordance with subdivisions a through c.

e. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in subdivisions a through c, the owner or operator shall comply with the requirements of section 33.1-24-05-109.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-107. General operating requirements.

1. Hazardous waste or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

2. The owner or operator shall use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

a. Spill prevention controls (for example, check valves, dry disconnect couplings);

b. Overfill prevention controls (for example, level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and

c. Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

3. The owner or operator shall comply with the requirements of section 33.1-24-05-109 if a leak or spill occurs in the tank system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-108. Inspections.

1. The owner or operator shall develop and follow a schedule and procedure for inspecting overfill controls.

2. The owner or operator shall inspect at least once each operating day data gathered from monitoring and leak detection equipment (for example, pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design.

[Note: Subsection 3 of section 33.1-24-05-06 requires the owner or operator to remedy any deterioration or malfunction the owner or operator finds. Section 33.1-24-05-109 requires the owner or operator to notify the department within twenty-four hours of confirming a leak. Also, 40 CFR 302 may require the owner or operator to notify the national response center of a release.]

3. In addition, except as noted under subsection 4, the owner or operator must inspect at least once each operating day:

a. Above ground portions of the tank system, if any, to detect corrosion or releases of waste.

b. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (for example, dikes) to detect erosion or signs of releases of hazardous waste (for example, wet spots, dead vegetation).

4. Owners or operators of tank systems that either use leak detection systems to alert facility personnel to leaks, or implement established workplace practices to ensure leaks are promptly identified, must inspect at least weekly those areas described in subdivisions a and b of subsection 3. Use of the alternate inspection schedule must be documented in the facility's operating record. This documentation must include a description of the established workplace practices at the facility.

5. Ancillary equipment that is not provided with secondary containment, as described in subdivisions a through d of subsection 6 of section 33.1-24-05-106, must be inspected at least once each operating day.

6. The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:

a. The proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and

- b. All sources of impressed current must be inspected or tested, or both, as appropriate, at least bimonthly (for example, every other month).

[Note: The practices described in the national association of corrosion engineers standard, "Recommended Practice P-028-85 Control of External Corrosion on Metallic, Buried, Partially Buried, or Submerged Liquid Storage Systems", and American petroleum institute publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems", may be used where applicable, as guidelines in maintaining and inspecting cathodic protection systems.]

7. The owner or operator shall document in the operating record of the facility an inspection of those items in subsections 1 through 3.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-109. Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator shall satisfy the following requirements:

1. **Cessation of use; prevent flow or addition of wastes.** The owner or operator shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

2. **Removal of waste from tank system or secondary containment system.**

- a. If the release was from the tank system, the owner/operator shall, within twenty-four hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

- b. If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as is possible to prevent harm to human health and the environment.

3. **Containment of visible releases to the environment.** The owner/operator shall immediately conduct a visual inspection of the release and, based upon that inspection:

- a. Prevent further migration of leak or spill to soils or surface water; and

- b. Remove, and properly dispose of, any visible contamination of the soil or surface water.

4. **Notifications, reports.**

- a. Any release to the environment, except as provided in subdivision b, must be reported to the department within twenty-four hours of its detection. The release should also be reported pursuant to 40 CFR 302.

- b. A leak or spill of hazardous waste is exempted from the requirements of this subsection if it is:

- (1) Less than or equal to a quantity of one pound; and

(2) Immediately contained and cleaned up.

c. Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the department:

(1) Likely route of migration of the release;

(2) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);

(3) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the department as soon as they become available;

(4) Proximity to downgradient drinking water, surface water, and populated areas; and

(5) Description of response actions taken or planned.

5. Provision of secondary containment, repair, or closure.

a. Unless the owner/operator satisfies the requirements of subdivisions b through d, the tank system must be closed in accordance with section 33.1-24-05-110.

b. If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

c. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.

d. If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator shall provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of section 33.1-24-05-106 before it can be returned to service unless the source of the leak is an aboveground portion of a leak system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of subsection 6 are satisfied. If a component is replaced to comply with the requirements of this subdivision, that component must satisfy the requirements for new tank systems or components in sections 33.1-24-05-105 and 33.1-24-05-106. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, (for example, the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with section 33.1-24-05-106 prior to being returned to use.

6. Certification of major repairs. If the owner/operator has repaired a tank system in accordance with subsection 5, and the repair has been extensive (for example, installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by a qualified professional engineer in accordance with subsection 4 of section 33.1-24-06-03 that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be placed in the operating record and maintained until closure of the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-110. Closure and postclosure care.

1. At closure of a tank system, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as a hazardous waste, unless subsection 4 of section 33.1-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in sections 33.1-24-05-59 through 33.1-24-05-88.
2. If the owner or operator demonstrates that not all contaminated soil can be practicably removed or decontaminated as required in subsection 1, then the owner or operator shall close the tank system and perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills under section 33.1-24-05-180. In addition, for the purposes of closure, postclosure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator shall meet all the requirements for landfills specified in sections 33.1-24-05-59 through 33.1-24-05-88.
3. If an owner or operator has a tank system that does not have secondary containment that meets the requirements of subsections 2 through 6 of section 33.1-24-05-106 and has not been granted a variance from the secondary containment requirements in accordance with subsection 7 of section 33.1-24-05-106, then:
 - a. The closure plan for the tank system must include both a plan for complying with subsection 1 and a contingent plan for complying with subsection 2;
 - b. A contingent postclosure plan for complying with subsection 2 must be prepared and submitted as part of the permit application;
 - c. The cost estimates calculated for closure and postclosure care must reflect the cost of complying with the contingent closure plan and the contingent postclosure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under subsection 1;
 - d. Financial assurance must be based on the cost estimates in subdivision c; and
 - e. For the purposes of the contingent closure and postclosure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, postclosure, and financial responsibility requirements for landfills under sections 33.1-24-05-59 through 33.1-24-05-88.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-111. Special requirements for ignitable or reactive waste.

1. Ignitable or reactive wastes may not be placed in tank systems, unless:
 - a. The waste is treated, rendered, or mixed before or immediately after placement in the tank systems so that:

(1) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive wastes under sections 33.1-24-02-11 or 33.1-24-02-13; and

(2) Subsection 2 of section 33.1-24-05-08 is complied with;

b. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the wastes to ignite or react; or

c. The tank system is used solely for emergencies.

2. The owner or operator of the facility where ignitable or reactive waste is stored or treated in a tank shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in tables 2-1 through 2-6 of the national fire protection association's "flammable and combustible liquids code", (1977 or 1981), incorporated by reference, see section 33.1-24-01-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-112. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials, may not be placed in the same tank system, unless subsection 2 of section 33.1-24-05-08 is complied with.

2. Hazardous waste may not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless subsection 2 of section 33.1-24-05-08 is complied with.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-113. Waste analysis and trial tests.

In addition to performing the waste analyses required by section 33.1-24-05-04, the owner or operator shall, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system or to be used to treat chemically a hazardous waste with a substantially different process than any previously used in that tank system:

1. Conduct waste analyses and trial treatment or storage tests (for example, bench scale or pilot-plant scale tests); or

2. Obtain written, documented information on similar wastes under similar operating conditions to show that the proposed treatment or storage will meet the requirements of subsection 1 of section 33.1-24-05-107.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-114. Special requirements for generators of between one hundred and one thousand kilograms per month that accumulate hazardous waste in tanks.

1. The requirements of this section apply to small quantity generators of more than one hundred kilograms, but less than one thousand kilograms of hazardous waste in a calendar month, that accumulate hazardous waste in tanks for less than one hundred eighty days (or two hundred seventy days if the generator must ship the waste greater than two hundred miles), and do not accumulate over six thousand kilograms onsite at any time.
2. Generators of between one hundred and one thousand kilograms per month hazardous waste shall comply with the following general operating requirements:
 - a. Treatment or storage of hazardous waste in tanks must comply with subsection 2 of section 33.1-24-05-08.
 - b. Hazardous wastes or treatment reagents may not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.
 - c. Uncovered tanks must be operated to ensure at least sixty centimeters [2 feet] of freeboard, unless the tank is equipped with a containment structure (for example, dike or trench), a drainage control system, or a diversion structure (for example, standby tank) with a capacity that equals or exceeds the volume of the top sixty centimeters [2 feet] of the tank.
 - d. Where hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow (for example, waste feed cutoff system or bypass system to a standby tank).

[Note: These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure (for example, a malfunction in the treatment process, a crack in the tank, etc.).]

3. Generators of between one hundred and one thousand kilograms per month accumulating hazardous waste in tanks shall inspect, where present:
 - a. Discharge control equipment (for example, waste feed cutoff systems, bypass systems, and drainage systems) at least once each operating day to ensure that it is in good working order;
 - b. Data gathered from monitoring equipment (for example, pressure and temperature gauges) at least once each operating day to ensure that the tank is being operated according to its design;
 - c. The level of waste in the tank at least once each operating day to ensure compliance with subdivision c of subsection 2;
 - d. The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and
 - e. The construction materials of, and the area immediately surrounding, discharge confinement structures (for example, dikes) at least weekly to detect erosion or obvious signs of leakage (for example, wet spots or dead vegetation).

4. Generators of between one hundred and one thousand kilograms per month accumulating hazardous waste in tanks must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

[Note: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with subsection 3 or 4 of section 33.1-24-02-03 that any solid waste removed from the owner's or operator's tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of chapters 33.1-24-03 through 33.1-24-06.]

5. Generators of between one hundred and one thousand kilograms per month shall comply with the following special requirements for ignitable or reactive waste:

a. Ignitable or reactive waste may not be placed in a tank, unless:

(1) The waste is treated, rendered, or mixed before or immediately after placement in a tank so that (a) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive wastes under section 33.1-24-02-11 or 33.1-24-02-13, and (b) subsection 2 of section 33.1-24-05-08 is complied with;

(2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or

(3) The tank is used solely for emergencies.

b. The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks shall comply with the buffer zone requirements for tanks contained in tables 2-1 through 2-6 of the national fire protection association's "flammable and combustible liquids code" (1977 or 1981). (Incorporated by reference, see section 33.1-24-01-05.)

6. Generators of between one hundred and one thousand kilograms per month must comply with the following special requirements for incompatible wastes:

a. Incompatible wastes, or incompatible wastes and materials, (see appendix III for examples) may not be placed in the same tank, unless subsection 2 of section 33.1-24-05-08 is complied with; and

b. Hazardous waste may not be placed in an unwashed tank which previously held an incompatible waste or material unless subsection 2 of section 33.1-24-05-08 is complied with.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-115. Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the requirements of sections 33.1-24-05-400 through 33.1-24-05-474.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-116. [Reserved]

33.1-24-05-117. [Reserved]

33.1-24-05-118. Applicability of surface impoundment requirements.

Sections 33.1-24-05-118 through 33.1-24-05-129 apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as section 33.1-24-05-01 provides otherwise.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-119. Design and operating requirements.

1. Any surface impoundment that is not covered by subsection 3 must have a liner for all portions of the impoundment (except for existing portions of such impoundments). The liner must be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into adjacent subsurface soil or ground water or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with subdivision a of subsection 1 of section 33.1-24-05-122. For impoundments that will be closed in accordance with subdivision b of subsection 1 of section 33.1-24-05-122, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be:
 - a. Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;
 - b. Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
 - c. Installed to cover all surrounding earth likely to be in contact with the waste or leachate.
2. The owner or operator may be exempted from the requirements of subsection 1 if the department finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (as defined in section 33.1-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the department will consider:
 - a. The nature and quantity of the wastes;
 - b. The proposed alternate design and operation;
 - c. The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and
 - d. All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.
3. The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface

impoundment unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system between such liners. "Construction commences" is as defined in section 33.1-24-01-04 under "existing facility".

a. Liner.

(1) The liner system must include:

(a) A top liner designed and constructed of materials (for example, a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and postclosure care period; and

(b) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (for example, a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and postclosure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least three feet [91.44 centimeters] of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second.

(2) The liners must comply with subdivisions a, b, and c of subsection 1.

b. The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure care period. The requirements for a leak detection system in this subdivision are satisfied by installation of a system that is, at a minimum:

(1) Constructed with a bottom slope of one percent or more;

(2) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-1} centimeters per second or more and a thickness of twelve inches [30.5 centimeters] or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-4} meters squared per second or more;

(3) Constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any waste cover materials or equipment used at the surface impoundment;

(4) Designed and operated to minimize clogging during the active life and postclosure care period; and

(5) Constructed with a sump or sumps and liquid removal methods (for example, pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump or sumps. The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

c. The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

d. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

4. The department may approve alternative design or operating practices to those specified in subsection 3 if the owner or operator demonstrates to the department that such design and operating practices, together with location characteristics:

a. Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal system specified in subsection 3; and

b. Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

5. The double-liner requirement set forth in subsection 3 may be waived by the department for any monofill, if:

a. The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristic in section 33.1-24-02-14; and

b. The monofill meets the following:

(1) The monofill:

(a) Has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this paragraph, the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of subsection 3 on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate postclosure requirements, including ground water monitoring and corrective action;

(b) Is located more than one-quarter mile [.40 kilometer] from an "underground source of drinking water" (as that term is defined in 40 CFR section 270.2); and

(c) Is in compliance with generally applicable ground water monitoring requirements for facilities with hazardous waste permits under chapter 33.1-24-06; or

(2) The owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

6. The owner or operator of any replacement surface impoundment unit is exempt from subsection 3 if:

a. The existing unit was constructed in compliance with the design standards of sections 33.1-24-05-118 through 33.1-24-05-143, 33.1-24-05-160 through 33.1-24-05-190, and the applicable requirements of subsection 5 of section 33.1-24-06-16; and

b. There is no reason to believe that the liner is not functioning as designed.

7. A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error.

8. A surface impoundment must have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the unit.

9. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-120. Monitoring and inspection.

1. During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from subsection 1 of section 33.1-24-05-119) and cover systems (for example, membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (for example, holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

b. Soil-based and admixed liners and covers must be inspected for imperfections, including lenses, cracks, channels, root holes, or other structural nonuniformities that may cause an increase in the permeability of the liner or cover.

These inspections must be conducted by a qualified professional (for example, registered professional engineer).

2. While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

a. Deterioration, malfunctions, or improper operation of overtopping control systems;

b. Sudden drops in the level of the impoundments contents;

c. The presence of liquids in leak detection systems; and

d. Severe erosion or other signs of deterioration in dikes or other containment devices.

3. Prior to the issuance of a permit, and after any period of time greater than six months during which the impoundment was not in service, the owner or operator shall obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish, in particular, that the dike:

- a. Will withstand the stress of the pressure exerted by the types and amounts of waste to be placed in the impoundment; and
 - b. Will not fail due to scouring or piping, without dependence on any liner system included in the surface impoundment construction.
4. An owner or operator required to have a leak detection system shall comply with the following:
- a. An owner or operator required to have a leak detection system under subsection 3 or 4 of section 33.1-24-05-119 must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.
 - b. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semiannually. If at any time during the postclosure care period the pump operating level is exceeded at units on quarterly or semiannual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.
 - c. "Pump operating level" is a liquid level proposed by the owner or operator and approved by the department based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-121. Emergency repairs - Contingency plans.

1. A surface impoundment must be removed from service in accordance with subsection 2 when:
 - a. The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or
 - b. The dike leaks.
2. When a surface impoundment must be removed from service as required by subsection 1, the owner or operator shall:
 - a. Immediately shut off the flow or stop the addition of wastes into the impoundment;
 - b. Immediately contain any surface leakage which has occurred or is occurring;
 - c. Immediately stop the leak;
 - d. Take any other necessary steps to stop or prevent catastrophic failure;
 - e. If a leak cannot be stopped by any other means, empty the impoundment; and
 - f. Notify the department of the problem in writing within seven days after detecting the problem.

3. As part of the contingency plan required in sections 33.1-24-05-26 through 33.1-24-05-36, the owner or operator shall specify a procedure for complying with the requirements of subsection 2.
4. No surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:
 - a. If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity must be recertified in accordance with subsection 3 of section 33.1-24-05-120.
 - b. If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:
 - (1) For any existing portion of the impoundment, a liner must be installed in compliance with subsection 1 of section 33.1-24-05-119; and
 - (2) For any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications approved in the permit.
5. A surface impoundment that has been removed from service in accordance with the requirements of this section and that is not being repaired must be closed in accordance with the provisions of section 33.1-24-05-122.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-122. Closure and postclosure care.

1. At closure, the owner or operator shall:
 - a. Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33.1-24-02-03 applies; or
 - b. Comply with the following:
 - (1) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;
 - (2) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and
 - (3) Cover the surface impoundment with a final cover designed and constructed to:
 - (a) Provide long-term minimization of the migration of liquids through the closed impoundment;
 - (b) Function with minimum maintenance;
 - (c) Promote drainage and minimize erosion or abrasion of the final cover;
 - (d) Accommodate settling and subsidence so that the cover's integrity is maintained; and

(e) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

2. If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with all postclosure requirements contained in sections 33.1-24-05-66 through 33.1-24-05-69, including maintenance and monitoring throughout the postclosure care period (specified in the permit under section 33.1-24-05-66). The owner or operator shall:

a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

b. Maintain and monitor the leak detection system in accordance with paragraph 4 of subdivision b of subsection 3 of section 33.1-24-05-119, subdivision c of subsection 3 of section 33.1-24-05-119, and subsection 4 of section 33.1-24-05-120, and comply with all other applicable leak detection system requirements of sections 33.1-24-05-118 through 33.1-24-05-129;

c. Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of sections 33.1-24-05-47 through 33.1-24-05-58; and

d. Prevent run-on and runoff from eroding or otherwise damaging the final cover.

3. The owner or operator shall also meet the following requirements:

a. If an owner or operator plans to close a surface impoundment in accordance with subdivision a of subsection 1, and the impoundment does not comply with the liner requirements of subsection 1 of section 33.1-24-05-119 and is not exempt from them in accordance with subsection 2 of that section, then:

(1) The closure plan for the impoundment under section 33.1-24-05-61 must include both a plan for complying with subdivision a of subsection 1 and a contingent plan for complying with subdivision b of subsection 1 in case not all contaminated subsoils can be practicably removed at closure; and

(2) The owner or operator shall prepare a contingent postclosure plan under section 33.1-24-05-67 for complying with subsection 2 in case not all contaminated subsoils can be practicably removed at closure.

b. The cost estimates calculated under section 33.1-24-05-76 for closure and postclosure care of an impoundment subject to this section must include the cost of complying with the contingent closure plan and the contingent postclosure plan, but are not required to include the cost of expected closure under subdivision a of subsection 1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-123. Special requirements for ignitable or reactive waste.

Ignitable or reactive waste may not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of sections 33.1-24-05-250 through 33.1-24-05-299; and:

1. The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:

- a. The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33.1-24-02-11 or 33.1-24-02-13; and
 - b. Subsection 2 of section 33.1-24-05-08 is complied with; or
2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react; or
 3. The surface impoundment is used solely for emergencies.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-124. Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see appendix III for examples of incompatible wastes and materials), may not be placed in the same surface impoundment, unless the owner or operator complies with subsection 2 of section 33.1-24-05-08.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-125. Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027.

1. Hazardous wastes F020, F021, F022, F023, F026, and F027 must not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the department pursuant to the standards set out in this subsection, and in accordance, with all other applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819. The factors to be considered are:
 - a. The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or volatilize or escape into the atmosphere;
 - b. The attenuative properties of underlying and surrounding soils or other materials;
 - c. The mobilizing properties of other materials codisposed with these wastes; and
 - d. The effectiveness of additional treatment, design, or monitoring techniques.
2. The department may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-126. Action leakage rate.

1. The department shall approve an action leakage rate for surface impoundment units subject to subsection 3 or 4 of section 33.1-24-05-119. The action leakage rate is the maximum design

flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot [.3048 meters]. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (for example, slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions (for example, the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

2. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under subsection 4 of section 33.1-24-05-120 to an average daily flow rate (gallons per acre per day) for each sump. Unless the department approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and if the unit is closed in accordance with subsection 2 of section 33.1-24-05-122, monthly during the postclosure care period when monthly monitoring is required under subsection 4 of section 33.1-24-05-120.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-127. Response actions.

1. The owner or operator of surface impoundment units subject to subsection 3 or 4 of section 33.1-24-05-119 must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection 2.
2. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
 - a. Notify the department in writing of the exceedance within seven days of the determination;
 - b. Submit a preliminary written assessment to the department within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
 - c. Determine to the extent practicable the location, size, and cause of any leak;
 - d. Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
 - e. Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
 - f. Within thirty days after the notification that the action leakage rate has been exceeded, submit to the department the results of the analyses specified in subdivisions c, d, and e, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the department a report summarizing the results of any remedial actions taken and actions planned.

3. To make the leak or remediation determinations, or both, in subdivisions c, d, and e of subsection 2, the owner or operator must:

a. Assess and conduct the following:

(1) Assess the source of liquids and amounts of liquids by source;

(2) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(3) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

b. Document why such assessments are not needed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-128. Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the requirements of sections 33.1-24-05-420 through 33.1-24-05-474.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-129. [Reserved]

33.1-24-05-130. Applicability of waste pile requirements.

1. Sections 33.1-24-05-130 through 33.1-24-05-143 apply to owners or operators of facilities that store or treat hazardous waste in piles, except as section 33.1-24-05-01 provides otherwise.

2. Sections 33.1-24-05-130 through 33.1-24-05-143 do not apply to owners and operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under sections 33.1-24-05-176 through 33.1-24-05-190.

3. The owner or operator of any waste pile that is inside or under a structure that provides protection from precipitation so that neither runoff nor leachate is generated is not subject to regulation under section 33.1-24-05-131 or under sections 33.1-24-05-47 through 33.1-24-05-58, provided that:

a. Liquids or materials containing free liquids are not placed in the pile;

b. The pile is protected from surface water run-on by the structure or in some other manner;

c. The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and

d. The pile will not generate leachate through decomposition or other reactions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-131. Design and operating requirements.

1. A waste pile (except for an existing portion of a waste pile) must have:

a. A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or ground water or surface water) during the active life of the facility. The liner must be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

b. A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The department will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed one foot [.3048 meters]. The leachate collection and removal system must be:

(1) Constructed of materials that are:

(a) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and

(b) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover materials, and by any equipment used at the pile; and

(2) Designed and operated to function without clogging through the scheduled closure of the waste pile.

2. The owner or operator of each new waste pile unit, each lateral expansion of a waste pile unit, and each replacement of an existing waste pile unit, must install two or more liners and a leachate collection and removal system above and between such liners.

a. Liners.

(1) The liner system must include:

(a) A top liner designed and constructed of materials (for example, a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and postclosure care period; and

(b) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (for example, a

geomembrane) to prevent the migration of hazardous constituents into this component during the active life and postclosure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least three feet [91.44 centimeters] of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second.

(2) The liners must comply with paragraphs 1, 2, and 3 of subdivision a of subsection 1.

b. The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the waste pile during the active life and postclosure care period. The department will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed one foot [.3048 meters]. The leachate collection and removal system must comply with paragraphs 3 and 4 of subdivision c.

c. The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure care period. The requirements for a leak detection system in this subsection are satisfied by installation of a system that is, at a minimum:

(1) Constructed with a bottom slope of one percent or more;

(2) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} centimeters per second or more and a thickness of twelve inches [30.5 centimeters] or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} square meters per second or more;

(3) Constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the waste pile;

(4) Designed and operated to minimize clogging during the active life and postclosure care period; and

(5) Constructed with sumps and liquid removal methods (for example, pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump or sumps. The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

d. The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

e. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

3. The department may approve alternative design or operating practices to those specified in subsection 2 if the owner or operator demonstrates to the department that such design and operating practices, together with location characteristics:
 - a. Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in subsection 2; and
 - b. Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.
4. Subsection 2 does not apply to monofills that are granted a waiver by the department in accordance with subsection 5 of section 33.1-24-05-119.
5. The owner or operator of any replacement waste pile unit is exempt from subsection 2 if:
 - a. The existing unit was constructed in compliance with the design standards of sections 33.1-24-05-118 through 33.1-24-05-143, 33.1-24-05-160 through 33.1-24-05-190, and the applicable requirements of subsection 5 of section 33.1-24-06-16; and
 - b. There is no reason to believe that the liner is not functioning as designed.
6. The owner or operator will be exempted from the requirements of subsection 1, if the department finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 33.1-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the department will consider:
 - a. The nature and quantity of the waste;
 - b. The proposed alternate design and operation;
 - c. The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and
 - d. All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.
7. The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portions of the pile during peak discharge from at least a twenty-five-year storm.
8. The owner or operator must design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
9. Collection and holding facilities (for example, tanks or basins) associated with run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.
10. If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.
11. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-132. Monitoring and inspection.

1. During construction or installation, liners (except in the case of existing portions of piles exempt from subsection 1 of section 33.1-24-05-131) and cover systems (for example, membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections, for example, holes, cracks, thin spots, or foreign materials. Immediately after construction or installation:
 - a. Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
 - b. Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural nonuniformities that may cause an increase in the permeability of the liner or cover.
2. While a waste pile is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:
 - a. Deterioration, malfunctions, or improper operation of run-on and runoff control systems;
 - b. Proper functioning of wind dispersal control systems where present; and
 - c. The presence of leachate in and proper functioning of leachate collection and removal systems, where present.
3. An owner or operator required to have a leak detection system under subsection 2 of section 33.1-24-05-131 must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-133. Special requirements for ignitable or reactive waste.

Ignitable or reactive waste may not be placed in a waste pile unless the waste or waste pile satisfies all applicable requirements of sections 33.1-24-05-250 through 33.1-24-05-299.

1. The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:
 - a. The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33.1-24-02-11 or 33.1-24-02-13; and
 - b. Subsection 2 of section 33.1-24-05-08 is complied with; or
2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-134. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials, may not be placed in the same pile unless subsection 2 of section 33.1-24-05-08 is complied with.
2. A pile of hazardous waste that is incompatible with any waste or other material stored nearby in containers, other piles, open tanks, or surface impoundments must be separated from the other material, or protected from them by means of a dike, berm, wall, or other device.
3. Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with subsection 2 of section 33.1-24-05-08.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-135. Closure and postclosure care.

1. At closure, the owner or operator must remove or decontaminate all waste residue, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33.1-24-02-03 applies.
2. If, after removing or decontaminating all residues and making all reasonable efforts to affect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator shall close the facility and perform postclosure care in accordance with the closure and postclosure care requirements that apply to landfills (section 33.1-24-05-180).
3. In addition:
 - a. The owner or operator of a waste pile that does not comply with the liner requirements of subdivision a of subsection 1 of section 33.1-24-05-131 and is not exempt from them in accordance with subsection 3 of section 33.1-24-05-130 or subsection 6 of section 33.1-24-05-131, shall:
 - (1) Include in the closure plan for the pile under section 33.1-24-05-61 both a plan for complying with subsection 1 and a contingent plan for complying with subsection 2 in case not all contaminated subsoil can be practicably removed at closure; and
 - (2) Prepare a contingent postclosure plan under section 33.1-24-05-67 for complying with subsection 2 in case not all contaminated subsoil can be practicably removed at closure.
 - b. The cost estimates calculated under section 33.1-24-05-76 for closure and postclosure care of a pile subject to this subsection must include the cost of complying with the contingent closure plan and the contingent postclosure plan, but are not required to include the cost of expected closure under subsection 1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-136. Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027.

1. Hazardous wastes F020, F021, F022, F023, F026, and F027 must not be placed in waste piles that are not enclosed (as defined in subsection 3 of section 33.1-24-05-130) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the department pursuant to the standards set out in this subsection and in accord with all other applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819. The factors to be considered are:
 - a. The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
 - b. The attenuative properties of underlying and surrounding soils or other materials;
 - c. The mobilizing properties of other materials codisposed with these wastes; and
 - d. The effectiveness of additional treatment, design, or monitoring techniques.
2. The department may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-137. Action leakage rate.

1. The department shall approve an action leakage rate for waste pile units subject to subsection 2 or 3 of section 33.1-24-05-131. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot [.3048 meters]. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (for example, slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions (for example, the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).
2. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under subsection 3 of section 33.1-24-05-132 to an average daily flow rate (gallons per acre per day) for each sump. Unless the department approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-138. Response actions.

1. The owner or operator of waste pile units subject to subsection 2 or 3 of section 33.1-24-05-131 must have an approved response action plan before receipt of waste. The response action plan

must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection 2.

2. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

a. Notify the department in writing of the exceedance within seven days of the determination;

b. Submit a preliminary written assessment to the department within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

c. Determine to the extent practicable the location, size, and cause of any leak;

d. Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;

e. Determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and

f. Within thirty days after the notification that the action leakage rate has been exceeded, submit to the department the results of the analyses specified in subdivisions c, d, and e, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the department a report summarizing the results of any remedial actions taken and actions planned.

3. To make the leak or remediation determinations, or both, in subdivisions c, d, and e of subsection 2, the owner or operator must:

a. Assess and conduct the following:

(1) Assess the source of liquids and amounts of liquids by source;

(2) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and

(3) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

b. Document why such assessments are not needed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-139. [Reserved]

33.1-24-05-140. [Reserved]

33.1-24-05-141. [Reserved]

33.1-24-05-142. [Reserved]

33.1-24-05-143. [Reserved]

33.1-24-05-144. Applicability of incinerator requirements.

1. Sections 33.1-24-05-144 through 33.1-24-05-159 apply to owners or operators of hazardous waste incinerators, except as section 33.1-24-05-01 provides otherwise.
2. Integration of the maximum achievable control technology standards.
 - a. Except as provided by subdivisions b through d, the standards of sections 33.1-24-05-144 through 33.1-24-05-159 do not apply to a new hazardous waste incineration unit that becomes subject to hazardous waste permit requirements after October 12, 2005; or no longer apply when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the maximum achievable control technology requirements of 40 CFR part 63, subpart EEE by conducting a comprehensive performance test and submitting to the department a notification of compliance under 40 CFR sections 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR part 63, subpart EEE. Nevertheless, even after this demonstration of compliance with the maximum achievable control technology standards, hazardous waste permit conditions that were based on the standards of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.
 - b. The maximum achievable control technology standards do not replace the closure requirements of section 33.1-24-05-151 or the applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-88 and sections 33.1-24-05-420 through 33.1-24-05-474.
 - c. The particulate matter standard of subsection 3 of section 33.1-24-05-147 remains in effect for incinerators that elect to comply with the alternative to the particulate matter standard under 40 CFR sections 63.1206(b)(14) and 63.1219(e).
 - d. The following requirements remain in effect for startup, shutdown, and malfunction events if a permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from these events:
 - (1) Subsection 1 of section 33.1-24-05-149 requiring that an incinerator operate in accordance with operating requirements specified in the permit; and
 - (2) Subsection 3 of section 33.1-24-05-149 requiring compliance with emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes.
3. After consideration of the waste analysis included with the permit application, and unless the department finds that the waste will pose a threat to human health or the environment when burned in an incinerator, the department may, on a case-by-case basis, exempt the applicant from some or all of the requirements of sections 33.1-24-05-144 through 33.1-24-05-159, except sections 33.1-24-05-145 and 33.1-24-05-151 if:
 - a. The waste to be burned is hazardous (either listed in or fails the characteristic tests in chapter 33.1-24-02) solely because it is:
 - (1) Ignitable, or corrosive, or both; or
 - (2) Reactive for characteristic other than those in subdivisions d and e of subsection 1 of section 33.1-24-02-13, and will not be burned when other hazardous wastes are present in the combustion zone; and

b. The waste contains insignificant concentrations of the hazardous constituents listed in appendix V of chapter 33.1-24-02.

4. The owner or operator of an incinerator may conduct trial burns subject only to the requirements of subsection 2 of section 33.1-24-06-19.

5. If the waste to be burned is one which is described by subdivision a, b, c, or d of subsection 2 and contains insignificant concentrations of the hazardous constituents listed in appendix V of chapter 33.1-24-02, then the department may, in establishing permit conditions, exempt the applicant from all requirements of sections 33.1-24-05-144 through 33.1-24-05-159, except sections 33.1-24-05-145 (waste analysis) and 33.1-24-05-151 (closure), after consideration of the waste analysis included in the permit application, unless the department finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-145. Waste analysis.

1. As a portion of the trial burn plan or with the permit application, the owner or operator shall have included an analysis of the waste feed sufficient to provide all information required by subdivision b of subsection 2 of section 33.1-24-06-19 or subdivision w of subsection 2 of section 33.1-24-06-17. Owners and operators of new hazardous waste incinerators shall provide the information required by subdivision c of subsection 2 of section 33.1-24-06-19 or subdivision w of subsection 2 of section 33.1-24-06-17 to the greatest extent possible.

2. Throughout normal operation the owner or operator shall conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limit specified in the permit (under subsection 2 of section 33.1-24-05-149).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-146. Designation of principal organic hazardous constituents.

1. Principal organic hazardous constituents in the waste feed must be treated to the extent required by the performance standard specified in section 33.1-24-05-147.

2. Designation of principal organic hazardous constituents.

a. For each waste feed to be burned, one or more principal organic hazardous constituents will be specified in the facility's permit from among those constituents listed in chapter 33.1-24-02, appendix V. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analysis and trial burns or alternative data submitted with the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as principal organic hazardous constituents. Constituents are more likely to be designated as principal organic hazardous constituents if they are present in large quantities or concentrations in the waste.

b. Trial principal organic hazardous constituents will be designated for performance of trial burns in accordance with the procedure for obtaining trial burn permits in subsection 2 of section 33.1-24-06-19.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-147. Performance standards.

An incinerator burning hazardous waste must be designed, constructed, and maintained so that when operated in accordance with operating requirements specified under section 33.1-24-05-149 it will meet the following performance standards:

1. a. Except as provided in subdivision b, an incinerator burning hazardous waste must achieve a destruction and removal efficiency of ninety-nine and ninety-nine one hundredths percent for each principal organic hazardous constituent designated (under section 33.1-24-05-146) in its permit for each waste feed. The destruction and removal efficiency is determined for each principal organic hazardous constituent from the following equation:

$$DRE = \frac{(W_{in} - W_{out})}{W_{in}} \times 100\%$$

where:

W_{in} = mass feed rate of one principal organic constituent in the waste stream feeding the incinerator, and

W_{out} = mass emission rate of the same principal organic hazardous constituent present in exhaust emissions prior to release to the atmosphere.

- b. An incinerator burning wastes F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency of ninety-nine and nine thousand nine hundred and ninety-nine ten thousandths percent for each principal organic hazardous constituent designated (under section 33.1-24-05-146) in its permit. This performance must be demonstrated on principal organic hazardous constituents that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. Destruction and removal efficiency is determined for each principal organic hazardous constituent from the equation in subdivision a.

2. An incinerator burning hazardous waste and producing stack emissions of more than one and eight-tenths kilograms per hour [4 pounds per hour] of hydrogen chloride must control hydrogen chloride emissions such that the rate of emission is no greater than the larger of either one and eight-tenths kilograms per hour or one percent of the hydrogen chloride in the stack gas prior to entering any pollution control equipment.

3. An incinerator burning hazardous waste must not emit particulate matter in excess of one hundred eighty milligrams per dry standard cubic meter [0.08 grains per dry standard cubic foot] when corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_M \times \frac{14}{21 - Y}$$

where:

P_c = the corrected concentration of particulate matter,

P_M = the measured concentration of particulate matter, and

Y = the measured concentration of oxygen in the stack gas using the Orsat method for oxygen analysis of dry flue gas presented in 40 CFR, part 60, appendix A (method 3) of the federal air pollution control regulations.

This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the department will select an appropriate correction procedure to be specified in the facility permit.

4. For purposes of permit enforcement, compliance with the operating requirements specified in the permit under section 33.1-24-05-149 will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this section may be "information" justifying modification, revocation, or reissuance of a permit under section 33.1-24-06-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-148. Hazardous waste incinerator permits.

1. The owner or operator of a hazardous waste incinerator may burn only waste specified in the permit and only under operating conditions specified for those wastes under section 33.1-24-05-149, except:
 - a. In approved trial burns under subsection 2 of section 33.1-24-06-19; or
 - b. Under exemptions created by section 33.1-24-05-144.
2. Other hazardous wastes may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with the permit application under subdivision w of subsection 2 of section 33.1-24-06-17.
3. The permit for a new hazardous waste incinerator must establish appropriate conditions for each of the applicable requirements of sections 33.1-24-05-144 through 33.1-24-05-159, including, but not limited to, allowable waste feeds and operating conditions necessary to meet the requirements of section 33.1-24-05-149, sufficient to comply with the following standards:
 - a. For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in subdivision b of this subsection, not to exceed a duration of seven hundred twenty hours operating time for treatment of hazardous waste, the operating requirements must be those most likely to ensure compliance with the performance standards of section 33.1-24-05-147, based on the department's engineering judgment. The department may extend the duration of this period once for up to seven hundred twenty additional hours when good cause for the extension is demonstrated by the applicant.
 - b. For the duration of the trial burn the operating requirements must be sufficient to demonstrate compliance with the performance standards of section 33.1-24-05-147 and must be in accordance with the approved trial burn plan.
 - c. For the period immediately following completion of the trial burn and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the department, the operating requirements must be those most likely to

ensure compliance with performance standards of section 33.1-24-05-147 based on the department's engineering judgment.

- d. For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in paragraph 3 of subdivision w of subsection 2 of section 33.1-24-06-17 as sufficient to ensure compliance with the performance standards of section 33.1-24-05-147.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-149. Operating requirements.

1. An incinerator must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated (in a trial burn or in alternative data as specified in subsection 2 of section 33.1-24-05-148 and included with a facility's permit application) to be sufficient to comply with the performance standards of section 33.1-24-05-147.
2. Each set of operating requirements will specify the composition of the waste feed (including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of section 33.1-24-05-147) to which the operating requirements apply. For each such waste feed, the permit will specify acceptable operating limits including the following conditions:
 - a. Carbon monoxide level in the stack exhaust gas;
 - b. Waste feed rate;
 - c. Combustion temperature;
 - d. An appropriate indicator of combustion gas velocity;
 - e. Allowable variation in incinerator system design or operating procedures; and
 - f. Such operating requirements as are necessary to ensure that the performance standards of section 33.1-24-05-147 are met.
3. During startup and shutdown of an incinerator, hazardous waste (except waste exempted in accordance with section 33.1-24-05-144) may not be fed into the incinerator unless the incinerator is operating within the conditions of operation, (temperature, air feed rate, etc.) specified in the permit.
4. Fugitive emissions from the combustion zone must be controlled by:
 - a. Keeping the combustion zone totally sealed against fugitive emissions;
 - b. Maintaining a combustion zone pressure lower than atmospheric pressure; or
 - c. An alternate means of control demonstrated (with the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.
5. An incinerator must be operated with a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from limits established under subsection 1.

6. An incinerator must cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-150. Monitoring and inspections.

1. The owner or operator shall conduct, at a minimum, the following monitoring while incinerating hazardous waste:
- a. Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the permit must be monitored on a continuous basis;
 - b. Carbon monoxide must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere; and
 - c. Upon request by the department, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of section 33.1-24-05-147.
2. The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be completely inspected at least daily for leaks, spills, fugitive emissions, and signs of tampering.
3. The emergency waste feed cutoff system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the department that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted monthly.
4. This monitoring and inspection data must be recorded and the records must be placed in the operating record required by section 33.1-24-05-40 and maintained in the operating record for five years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-151. Closure.

At closure the owner or operator shall remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-152. [Reserved]

33.1-24-05-153. [Reserved]

33.1-24-05-154. [Reserved]

33.1-24-05-155. [Reserved]

33.1-24-05-156. [Reserved]

33.1-24-05-157. [Reserved]

33.1-24-05-158. [Reserved]

33.1-24-05-159. [Reserved]

33.1-24-05-160. Applicability of land treatment requirements.

Sections 33.1-24-05-160 through 33.1-24-05-175 apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as section 33.1-24-05-01 provides otherwise.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-161. Treatment program.

1. An owner or operator subject to sections 33.1-24-05-160 through 33.1-24-05-175 shall establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The department will specify in the facility permit the elements of the treatment program, including:

a. The wastes that are capable of being treated at the unit based on a demonstration under section 33.1-24-05-162;

b. Design measures and operating practices necessary to maximize the success of degradation, transformation, and the immobilization processes in the treatment zone in accordance with subsection 1 of section 33.1-24-05-163; and

c. Unsaturated zone monitoring provisions meeting the requirements of section 33.1-24-05-165.

2. The department will specify in the facility permit the hazardous constituents that must be degraded, transformed, or immobilized under sections 33.1-24-05-160 through 33.1-24-05-175. Hazardous constituents are constituents identified in appendix V of chapter 33.1-24-02 that are reasonably expected to be in or derived from waste placed in or on the treatment zone.

3. The department will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone must be:

a. No more than one and five-tenths meters [5 feet] from the initial soil surface; and

b. More than one meter [3 feet] above the seasonal high water table.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-162. Treatment demonstration.

1. For each waste that will be applied to the treatment zone, the owner or operator shall demonstrate prior to application of the waste that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.
2. In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under subsection 1 the owner or operator shall obtain a treatment or disposal permit under subsection 3 of section 33.1-24-06-19. The department will specify in this permit the testing, analytical, design, and operating requirements (including the duration of the tests and analyses, and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and cleanup activities) necessary to meet the requirements in subsection 3.
3. Any field test or laboratory analysis conducted in order to make a demonstration under subsection 1 must:
 - a. Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:
 - (1) The characteristics of the waste (including the presence of constituents in appendix V of chapter 33.1-24-02);
 - (2) The climate of the area;
 - (3) The topography of the surrounding area;
 - (4) The characteristics of the soil in the treatment zone (including depth); and
 - (5) The operating practices to be used at the unit.
 - b. Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and
 - c. Be conducted in a manner that protects human health and the environment considering:
 - (1) The characteristics of the waste to be tested;
 - (2) The operating and monitoring measures to be taken during the course of the test;
 - (3) The duration of the tests;
 - (4) The volume of waste used in the test; and
 - (5) In the case of field tests, the potential for the migration of hazardous constituents to ground water or surface water.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-163. Design and operating requirements.

The department will specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

1. The owner or operator shall design, construct, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator shall design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under section 33.1-24-05-162. At a minimum, the department will specify the following in the facility permit:

a. The rate and method of waste application to the treatment zone;

b. Measures to control soil pH;

c. Measures to enhance microbial or chemical reaction, for example, fertilization, tilling; and

d. Measures to control the moisture content of the treatment zone.

2. The owner or operator shall design, construct, operate, and maintain the treatment zone to minimize runoff from hazardous constituents during the active life of the land treatment unit.

3. The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a twenty-five-year storm.

4. The owner or operator shall design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.

5. Collection and holding facilities, for example, tanks or basins, associated with the run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

6. If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator shall manage the unit to control wind dispersal.

7. The owner or operator shall inspect the unit weekly and after storms to detect evidence of:

a. Deterioration, malfunctions, or improper operation of run-on or runoff control systems; and

b. Improper functioning of wind dispersal control measures.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-164. Food chain crops.

The department may allow the growth of food chain crops in or on the treatment zone only if the owner or operator satisfies the conditions of this section. The department will specify in the facility permit the specific food chain crops which may be grown.

1. The owner or operator shall demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that hazardous constituents other than cadmium:

a. Will not be transferred to the food or feed portions of the crop by plant uptake or direct contact and will not otherwise be ingested by food chain animals, for example, by grazing; or

b. Will not occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.

2. The owner or operator shall make the demonstration required by subsection 1 prior to the planting of crops at the facility for all constituents identified in appendix V of chapter 33.1-24-02 that are reasonably expected to be in or derived from waste placed in or on the treatment zone.

3. In making a demonstration under subsection 1, the owner or operator may use field tests, greenhouse studies, available data, or in the case of existing units, operating data, and shall:

a. Base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics (for example, pH, cation exchange capacity), specific wastes, application rates, application methods, and crops to be grown;

b. Describe the procedures used in conducting any tests, including the sample collection criteria, sample size, analytical methods, and statistical procedures.

4. If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under subsection 1, the owner or operator shall obtain a permit for conducting such activities.

5. The owner or operator shall comply with the conditions of either subdivision a or b if cadmium is contained in wastes applied to the treatment zone:

a. The following condition must be met:

(1) The pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for wastes containing cadmium in concentrations of two milligrams per kilogram (dry weight) or less;

(2) The annual application of cadmium from waste must not exceed five-tenths kilogram per hectare on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops the annual cadmium rate may not exceed:

(a) Two kilograms per hectare through June 30, 1984;

(b) One and twenty-five-hundredths kilograms per hectare during the period from July 1, 1984, through December 31, 1986; or

(c) Five-tenths kilogram per hectare on and after January 1, 1987; and

(3) The cumulative application rate of cadmium from waste must not exceed five kilograms per hectare if the waste and soil mixture has a pH of less than 6.5; and

(4) If the waste and soil mixture has a pH of 6.5 or greater and is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste must not exceed: Five kilograms per hectare if soil cation exchange capacity is less than five milliequivalents per one hundred grams; ten kilograms per hectare if soil cation exchange capacity is five to fifteen milliequivalents per one hundred grams;

and twenty kilograms per hectare if soil cation exchange capacity is greater than fifteen milliequivalents per one hundred grams.

b. The following conditions must be met:

- (1) Animal feed must be the only food chain crop produced;
- (2) The pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level must be maintained whenever food chain crops are grown;
- (3) There must be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan must describe the measures to be taken to safeguard against the possible health hazards from cadmium entering the food chain which may result from alternative land uses; and
- (4) Future property owners must be notified by stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown, except in compliance with subdivision b.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-165. Unsaturated zone monitoring.

An owner or operator subject to sections 33.1-24-05-160 through 33.1-24-05-175 shall establish an unsaturated zone monitoring program to discharge the following responsibilities:

1. The owner or operator shall monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.
 - a. The department will specify the hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under subsection 2 of section 33.1-24-05-161.
 - b. The department may require monitoring for principal hazardous constituents in lieu of the constituents specified under subsection 2 of section 33.1-24-05-161. Principal hazardous constituents are hazardous constituents contained in the waste to be applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The department will establish principal hazardous constituents if the department finds, based on waste analyses, treatment demonstrations, or other data that effective degradation, transformation, or immobilization of the principal hazardous constituents will assure treatment of at least equivalent levels for the other hazardous constituents in the wastes.
2. The owner or operator must install an unsaturated zone monitoring system that includes soil monitoring using soil cores, and soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system must consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:
 - a. Represent the quality of background soil-pore liquid quality and the chemical makeup of soil that has not been affected by leakage from the treatment zone; and

b. Indicate the quality of soil-pore liquid in the chemical makeup of the soil below the treatment zone.

3. The owner or operator shall establish a background value for each hazardous constituent to be monitored under subsection 1. The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.

a. Background soil values may be based on a one-time sampling at a background plot having characteristics similar to that of the treatment zone.

b. Background soil-pore liquid values must be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.

c. The owner or operator shall express all background values in a form necessary for the determination of statistically significant increases under subsection 6.

d. In taking samples used in the determination of all background values, the owner or operator shall use an unsaturated zone monitoring system that complies with subdivision a of subsection 2.

4. The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The department will specify the frequency and timing of soil and soil-pore liquid monitoring in the facility permit after considering the frequency, timing, and rate of waste application and the soil permeability. The owner or operator shall express the results of the soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under subsection 6.

5. The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical makeup in the soil below the treatment zone. At a minimum, the owner or operator shall implement procedures and techniques for:

a. Sample collection;

b. Sample preservation and shipment;

c. Analytical procedures; and

d. Chain of custody control.

6. The owner or operator shall determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under subsection 1 below the treatment zone each time the owner or operator conducts soil monitoring and soil-pore liquid monitoring under subsection 4.

a. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent as determined under subsection 4 to the background value for that constituent according to the statistical procedures specified in the facility permit under this subsection.

b. The owner or operator shall determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The department will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of the soil and soil-pore liquid samples.

c. The owner or operator shall determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The department will specify a statistical procedure in the facility permit that the department finds:

(1) Is appropriate for the distribution of data used to establish background values; and

(2) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

7. If the owner or operator determines pursuant to subsection 6 that there is a statistically significant increase of hazardous constituents below the treatment zone, the owner or operator shall:

a. Notify the department of this finding in writing within seven days. The notification must indicate what constituents have shown statistically significant increases.

b. Within ninety days submit to the department an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

8. If the owner or operator determines pursuant to subsection 6 that there is a statistically significant increase of hazardous constituents below the treatment zone, the owner or operator may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make this demonstration in addition to, or in lieu of, submitting a permit modification application under subdivision b of subsection 7, the owner or operator is still required to submit a permit modification within the time specified in subdivision b of subsection 7 should the demonstration be unsuccessful. In making this demonstration the owner or operator shall:

a. Notify the department in writing within seven days of determining a statistically significant increase below the treatment zone that the owner or operator intends to make a determination under this subsection;

b. Within ninety days submit a report to the department demonstrating that a source other than the regulated units caused the increase or that the increase resulted in error in sampling, analysis, or evaluation;

c. Within ninety days submit to the department an application for permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

d. Continue to monitor in accordance with the unsaturated zone monitoring program established under this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-166. Recordkeeping.

The owner or operator shall include hazardous waste application dates and rates in the operating record required under section 33.1-24-05-40.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

33.1-24-05-167. Closure and postclosure care.

1. During the closure period the owner or operator shall:

- a. Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required under subsection 1 of section 33.1-24-05-163, except to the extent such measures are inconsistent with subdivision h of this subsection;
- b. Continue all operations in the treatment zone to minimize runoff of hazardous constituents as required under subsection 2 of section 33.1-24-05-163;
- c. Maintain the run-on control system required under subsection 3 of section 33.1-24-05-163;
- d. Maintain the runoff management system required under subsection 4 of section 33.1-24-05-163;
- e. Control wind dispersal of hazardous waste if required under subsection 6 of section 33.1-24-05-163;
- f. Continue to comply with any prohibitions or conditions concerning growth of food chain crops under section 33.1-24-05-164;
- g. Continue unsaturated zone monitoring in compliance with section 33.1-24-05-165, except that soil-pore liquid monitoring may be terminated one year after the last application of waste to the treatment zone if, during that year, the soil-pore liquid monitoring shows that no hazardous constituents are leaching from the treatment zone in the soil-pore water; and
- h. Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover must be capable of maintaining growth without extensive maintenance.

2. For the purpose of complying with section 33.1-24-05-64, when closure is completed the owner or operator may submit to the department certification by an independent qualified soil scientist, in lieu of a qualified professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

3. During the postclosure care period the owner or operator shall:

- a. Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other postclosure care activities;
- b. Maintain a vegetative cover over closed portions of the facility;
- c. Maintain the run-on control system required under subsection 3 of section 33.1-24-05-163;
- d. Maintain the runoff management system required under subsection 4 of section 33.1-24-05-163;
- e. Control wind dispersal of hazardous waste if required under subsection 6 of section 33.1-24-05-163;

f. Continue to comply with any prohibitions or conditions concerning growth of food chain crops under section 33.1-24-05-164; and

g. Continue unsaturated zone monitoring in compliance with section 33.1-24-05-165 except that soil-pore liquid monitoring may be terminated one year after the last application of waste to the treatment zone if, during that year, the soil-pore liquid monitoring shows that no hazardous constituents are leaching from the treatment zone in the soil-pore water.

4. The owner or operator is not subject to regulation under subsection 3 or subdivision h of subsection 1 if the department finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified in subdivision c. The owner or operator may submit such a demonstration to the department at any time during the closure or postclosure care periods. For purposes of this subsection:

a. The owner or operator shall establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under subsection 2 of section 33.1-24-05-161:

(1) Background soil values may be based on a one-time sampling of the background plot having characteristics similar to those of the treatment zone; and

(2) The owner or operator shall express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under subdivision c;

b. In taking samples used in the determination of background and treatment zone values, the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical makeup of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively; and

c. In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value of that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator shall use a statistical procedure that:

(1) Is appropriate for the distribution of the data used to establish background values; and

(2) Provides a reasonable balance between the probability of falsely identifying hazardous constituent presence in the treatment zone and the probability of failing to identify a real presence in the treatment zone.

5. During closure or postclosure care, or both, the owner or operator is not subject to regulation under sections 33.1-24-05-47 through 33.1-24-05-58 if the department finds that the owner or operator satisfies subsection 4 and if unsaturated zone monitoring under section 33.1-24-05-165 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-168. Special requirements for ignitable or reactive waste.

The owner or operator may not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of sections 33.1-24-05-250 through 33.1-24-05-299; and:

1. The waste is immediately incorporated into the soil so that:
 - a. The resulting waste mixture or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33.1-24-02-11 or 33.1-24-02-13; and
 - b. Subsection 2 of section 33.1-24-05-08 is complied with; or
2. The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-169. Special requirements for incompatible wastes.

The owner or operator may not place incompatible wastes or incompatible wastes and materials in or on the same treatment zone unless subsection 2 of section 33.1-24-05-08 is complied with.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-170. Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027.

1. Hazardous wastes F020, F021, F022, F023, F026, and F027 must not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by the department pursuant to the standards set out in this subsection, and in accord with all other applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819. The factors to be considered are:
 - a. The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
 - b. The attenuative properties of underlying and surrounding soils or other materials;
 - c. The mobilizing properties of other materials codisposed with these wastes; and
 - d. The effectiveness of additional treatment, design, or monitoring techniques.
2. The department may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-171. [Reserved]

33.1-24-05-172. [Reserved]

33.1-24-05-173. [Reserved]

33.1-24-05-174. [Reserved]

33.1-24-05-175. [Reserved]

33.1-24-05-176. Applicability of landfill requirements.

Sections 33.1-24-05-176 through 33.1-24-05-190 apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as section 33.1-24-05-01 provides otherwise.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-177. Design and operating requirements.

1. Any landfill that is not covered by subsection 3 must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:

a. A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner must be:

(1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and

b. A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The department will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed one foot [.3048 meter]. The leachate collection and removal system must be:

(1) Constructed of materials that are:

(a) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and

(b) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and

(2) Designed and operated to function without clogging through the scheduled closure of the landfill.

2. The owner or operator will be exempted from the requirements of subsection 1 if the department finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see section 33.1-24-05-50) into the ground water or surface water at any future time. In deciding whether to grant an exemption, the department will consider:

a. The nature and quantity of the waste;

b. The proposed alternate design and operation;

c. The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and ground water or surface water; and

d. All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

3. The owner or operator of each new landfill unit on which construction commences after January 19, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in section 33.1-24-01-04 under "existing facility".

a. Liner.

(1) The liner system must include:

(a) A top liner designed and constructed of materials (for example, a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and postclosure care period; and

(b) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (for example, a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and postclosure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least three feet [91.44 centimeters] of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second.

(2) The liners must comply with paragraphs 1, 2, and 3 of subdivision a of subsection 1.

b. The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and postclosure care period. The department will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed thirty centimeters [1 foot]. The leachate collection and removal system must comply with paragraphs 3 and 4 of subdivision c.

c. The leachate collection and removal system between the liners, and immediately above the bottom composite liners in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of

detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure care period. The requirements for a leak detection system in this subdivision are satisfied by installation of a system that is, at a minimum:

- (1) Constructed with a bottom slope of one percent or more;
- (2) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} centimeters per second or more and a thickness of twelve inches [30.5 centimeters] or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} square meters per second or more;
- (3) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfill;
- (4) Designed and operated to minimize clogging during the active life and postclosure care period; and
- (5) Constructed with sumps and liquid removal methods (for example, pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump or sumps. The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

d. The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

e. The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

4. The department may approve alternative design or operating practices to those specified in subsection 3 if the owner or operator demonstrates to the department that such design and operating practices, together with location characteristics:

a. Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in subsection 3; and

b. Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

5. The double-liner requirements set forth in subsection 3 may be waived by the department for any monofill, if:

a. The monofill contains only hazardous waste from foundry furnace emission controls or metal casting molding sand and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the toxicity characteristics in section 33.1-24-02-14 with hazardous waste numbers D004 through D017; and

b. Monofill liner.

(1) Evidence of leaking.

(a) The monofill has at least one liner for which there is no evidence that such liner is leaking;

(b) The monofill is located more than one-quarter mile from an "underground source of drinking water" (as that term is defined in 40 CFR section 270.2); and

(c) The monofill is in compliance with generally acceptable ground water monitoring requirements for facilities with hazardous waste permits; or

(2) The owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

6. The owner or operator of any replacement landfill unit is exempt from subsection 3 if:

a. The existing unit was constructed in compliance with the design standards of this article; and

b. There is no reason to believe that the liner is not functioning as designed.

7. The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a twenty-five-year storm.

8. The owner or operator shall design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.

9. Collection and holding facilities (for example, tanks or basins) associated with run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of this system.

10. If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the landfill to control wind dispersal.

11. The department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-178. Monitoring and inspection.

1. During construction or installation, the liners (except in the case of existing portions of landfills exempt from subsection 1 of section 33.1-24-05-177) and cover systems (for example, membranes, sheets or coatings) must be inspected for uniformity, damage, and imperfections (for example, holes, cracks, thin spots, or foreign materials) immediately after construction or installation:

a. Synthetic liners and covers must be inspected by a qualified professional (for example, a registered professional engineer) to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

b. Soil based and admixed liners and covers must be inspected by a qualified professional (for example, a registered professional engineer) for imperfections, including lenses,

cracks, channels, root holes, or other structural nonuniformities that may cause an increase in the permeability of the liner or cover.

2. While a landfill is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

- a. Deterioration, malfunctions, or improper operation of run-on and runoff control systems;
- b. Proper functioning of wind dispersal control systems, where present; and
- c. The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

3. Leak detection system.

- a. An owner or operator required to have a leak detection system under subsection 3 or 4 of section 33.1-24-05-177 must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.
- b. After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semiannually. If at any time during the postclosure care period the pump operating level is exceeded at units on quarterly or semiannual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.
- c. "Pump operating level" is a liquid level proposed by the owner or operator and approved by the department based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-179. Surveying and recordkeeping.

The owner or operator of a landfill shall maintain the following items in the operating records required under section 33.1-24-05-40:

- 1. On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed bench marks; and
- 2. The contents of each cell and the approximate location of each hazardous waste type within each cell.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-180. Closure and postclosure care.

- 1. At final closure of the landfill or upon closure of any cell, the owner or operator shall cover the landfill or cell with a final cover designed and constructed to:

- a. Provide long-term minimization of migration of liquids through the closed landfill;
- b. Function with minimum maintenance;
- c. Promote drainage and minimize erosion or abrasion of the cover;
- d. Accommodate settling and subsidence so that the cover's integrity is maintained; and
- e. Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

2. After final closure, the owner or operator shall comply with all postclosure requirements contained in sections 33.1-24-05-66 through 33.1-24-05-69, including maintenance and monitoring throughout the postclosure care period (specified in the permit under section 33.1-24-05-66). The owner or operator shall:

- a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
- b. Continue to operate the leachate collection and removal system until leachate is no longer detected;
- c. Maintain and monitor the leak detection system in accordance with paragraph 4 of subdivision c of subsection 3 of section 33.1-24-05-177, subdivision d of subsection 3 of section 33.1-24-05-177, and subsection 3 of section 33.1-24-05-178, and comply with all other applicable leak detection system requirements of sections 33.1-24-05-176 through 33.1-24-05-190;
- d. Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of sections 33.1-24-05-47 through 33.1-24-05-58;
- e. Prevent run-on and runoff from eroding or otherwise damaging the final cover; and
- f. Protect and maintain surveyed bench marks used in complying with section 33.1-24-05-179.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-181. Special requirements for ignitable or reactive waste.

1. Except as provided in subsection 2 and in section 33.1-24-05-185, ignitable or reactive waste may not be placed in a landfill, unless the waste and landfill meet all applicable requirements of sections 33.1-24-05-250 through 33.1-24-05-299, and:

- a. The resulting waste mixture or dissolution of material no longer meets the definition of ignitable or reactive waste under section 33.1-24-02-11 or 33.1-24-02-13; and
- b. Subsection 2 of section 33.1-24-05-08 is complied with.

2. Except for prohibited wastes which remain subject to treatment standards in sections 33.1-24-05-280 through 33.1-24-05-289, ignitable wastes in containers may be landfilled without meeting the requirements of subsection 1, provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes must be disposed of in nonleaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause

ignition of the wastes; must be covered daily with soil or other noncombustible material to minimize the potential for ignition of the wastes; and may not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-182. Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see appendix III for examples of incompatible wastes and materials), may not be placed in the same landfill cell, unless subsection 2 of section 33.1-24-05-08 is complied with.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-183. Special requirements for bulk and containerized liquids.

1. The placement of bulk or noncontainerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

2. To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: method 9095B (paint filter liquids test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05.

3. Containers holding free liquids must not be placed in a landfill unless:

a. All free-standing liquid:

(1) Has been removed by decanting, or other methods;

(2) Has been mixed with sorbent or solidified so that freestanding liquid is no longer observed; or

(3) Has been otherwise eliminated;

b. The container is very small, such as an ampule;

c. The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or

d. The container is a lab pack as defined in section 33.1-24-05-185 and is disposed of in accordance with section 33.1-24-05-185.

4. Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in subdivision a; materials that pass one of the tests in subdivision b; or materials that are determined by the department to be nonbiodegradable through the chapter 33.1-24-01 petition process.

a. Nonbiodegradable sorbents.

(1) Inorganic minerals, other inorganic materials, and elemental carbon (for example, aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites,

zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon);

(2) High molecular weight synthetic polymers (for example, polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

(3) Mixtures of these nonbiodegradable materials.

b. Test for nonbiodegradable sorbents.

(1) The sorbent material is determined to be nonbiodegradable under ASTM method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi;

(2) The sorbent material is determined to be nonbiodegradable under ASTM method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or

(3) The sorbent material is determined to be nonbiodegradable under Organization for Economic Cooperation and Development test 301B: [CO₂ Evolution (Modified Sturm Test)].

5. The placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the department, or the department determines that:

a. The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

b. Placement in such owner or operator's landfill will not present a risk of contamination of any "underground source of drinking water" (as that term is defined in 40 CFR section 270.2).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-184. Special requirements for containers.

Unless they are very small, such as an ampule, containers must be either:

1. At least ninety percent full when placed in the landfill; or

2. Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-185. Disposal of small containers of hazardous waste in overpacked drums (lab packs).

Small containers of hazardous waste in overpacked drums (lab packs) may be placed in a landfill if the following requirements are met:

1. Hazardous waste must be packaged in nonleaking inside containers. The inside containers must be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the department of transportation hazardous materials regulations [49 CFR, parts 173, 178, and 179], if those regulations specify particular inside container for the waste.
2. The inside containers must be overpacked in an open head department of transportation specification metal shipping container [49 CFR, parts 178 and 179] of no more than four hundred sixteen-liter [110-gallon] capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material, determined to be nonbiodegradable in accordance with subsection 4 of section 33.1-24-05-183, to completely sorb all of the liquid contents of the inside containers. The metal outer container must be full after it has been packed with inside containers and sorbent material.
3. The sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers, in accordance with subsection 2 of section 33.1-24-05-08.
4. Incompatible wastes, as defined in section 33.1-24-01-04, may not be placed in this same outside container.
5. Reactive wastes, other than cyanide-bearing or sulfide-bearing waste, as defined in subdivision e of subsection 1 of section 33.1-24-02-13, must be treated or rendered nonreactive prior to packaging in accordance with subsections 1 through 4. Cyanide-bearing and sulfide-bearing reactive waste may be packed in accordance with subsections 1 through 4 without first being treated or rendered nonreactive.
6. Such disposal is in compliance with the requirements of sections 33.1-24-05-250 through 33.1-24-05-299. Persons who incinerate lab packs according to the requirements in subdivision a of subsection 3 of section 33.1-24-05-282 may use fiber drums in place of metal outer containers. Such fiber drums must meet the department of transportation specifications in 49 CFR 173.12 and be overpacked according to the requirements in subsection 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-186. Special requirements for hazardous wastes F020, F021, F022, F023, F026, and F027.

1. Hazardous wastes F020, F021, F022, F023, F026, and F027 may not be placed in a landfill unless the owner or operator operates the landfill in accordance with a management plan for these wastes that is approved by the department pursuant to the standards set out in this subsection and in accord with all other applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819. The factors to be considered are:

- a. The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere;
 - b. The attenuative properties of underlying and surrounding soils or other materials;
 - c. The mobilizing properties of other materials codisposed with these wastes; and
 - d. The effectiveness of additional treatment, design, or monitoring requirements.
2. The department may determine that additional design, operating, and monitoring requirements are necessary for landfills managing hazardous wastes F020, F021, F022, F023, F026, and F027 in order to reduce the possibility of migration of these wastes to ground water, surface water, or air so as to protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-187. Action leakage rate.

1. The department shall approve an action leakage rate for landfill units subject to subsection 3 or 4 of section 33.1-24-05-177. The action leakage rate is the maximum design flow rate that the leak detection system can remove without the fluid head on the bottom liner exceeding one foot [.3048 meters]. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (for example, slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the leak detection system, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the leak detection system, and proposed response actions (for example, the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).
2. To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under subsection 3 of section 33.1-24-05-178, to an average daily flow rate (gallons per acre per day) for each sump. Unless the department approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the postclosure care period when monthly monitoring is required under subsection 3 of section 33.1-24-05-178.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-188. Response actions.

1. The owner or operator of landfill units subject to subsection 3 or 4 of section 33.1-24-05-177 must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in subsection 2.
2. If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
 - a. Notify the department in writing of the exceedance within seven days of the determination;

- b. Submit a preliminary written assessment to the department within fourteen days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
- c. Determine to the extent practicable the location, size, and cause of any leak;
- d. Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
- e. Determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and
- f. Within thirty days after the notification that the action leakage rate has been exceeded, submit to the department the results of the analyses specified in subdivisions c, d, and e, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the department a report summarizing the results of any remedial actions taken and actions planned.

3. To make the leak or remediation determinations, or both, in subdivisions c, d, and e of subsection 2, the owner or operator must:

a. Assess and conduct the following:

- (1) Assess the source of liquids and amounts of liquids by source;
- (2) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquids; and
- (3) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

b. Document why such assessments are not needed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-189. [Reserved]

33.1-24-05-190. [Reserved]

33.1-24-05-191. [Reserved]

33.1-24-05-192. [Reserved]

33.1-24-05-193. [Reserved]

33.1-24-05-194. [Reserved]

33.1-24-05-195. [Reserved]

33.1-24-05-196. [Reserved]

33.1-24-05-197. [Reserved]

33.1-24-05-198. [Reserved]

33.1-24-05-199. [Reserved]

33.1-24-05-200. [Reserved]

33.1-24-05-201. Applicability to recyclable materials used in a manner constituting disposal.

1. Sections 33.1-24-05-201 through 33.1-24-05-209 apply to recyclable materials that are applied to or placed on the land:
 - a. Without mixing with any other substances; or
 - b. After mixing or combination with any other substances. These materials will be referred to throughout sections 33.1-24-05-201 through 33.1-24-05-209 as "materials used in a manner that constitutes disposal".
2. Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in sections 33.1-24-05-280 through 33.1-24-05-289 (or applicable prohibition levels in section 33.1-24-05-272 or Resource Conservation and Recovery Act section 3004(d), where no treatment standards have been established) for each recyclable material (for example, hazardous waste) that they contain, and the recycler complies with subdivision f of subsection 2 of section 33.1-24-05-256.
3. Antiskid or deicing uses of slags, which are generated from high temperature metals recovery processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in subsection 2 and remain subject to regulation.
4. Fertilizers that contain recyclable materials are not subject to regulation provided that:
 - a. They are zinc fertilizers excluded from the definition of solid waste according to subdivision u of subsection 1 of section 33.1-24-02-04; or
 - b. They meet the applicable treatment standards in sections 33.1-24-05-280 through 33.1-24-05-289 for each hazardous waste that they contain.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-202. Standards applicable to generators and transporters of materials used in a manner that constitutes disposal.

Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of chapters 33.1-24-03 through 33.1-24-04 and the notification requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-203. Standards applicable to storers of materials that are to be used in a manner that constitutes disposal who are not the ultimate users.

Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the material, are regulated under all applicable provisions of sections 33.1-24-05-01 through 33.1-24-05-143, sections 33.1-24-05-950 through 33.1-24-05-1149, and chapters 33.1-24-06 and 33.1-24-07 and the notification requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-204. Standards applicable to users of materials that are used in a manner that constitutes disposal.

1. Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of sections 33.1-24-05-01 through 33.1-24-05-143, sections 33.1-24-05-160 through 33.1-24-05-190, sections 33.1-24-05-250 through 33.1-24-05-299, and chapters 33.1-24-06 and 33.1-24-07 and the notification requirements. (These requirements do not apply to products which contain these recyclable materials under the provisions of subsection 2 of section 33.1-24-05-201.)
2. The use of waste oil or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-205. [Reserved]

33.1-24-05-206. [Reserved]

33.1-24-05-207. [Reserved]

33.1-24-05-208. [Reserved]

33.1-24-05-209. [Reserved]

33.1-24-05-210. [Reserved]

33.1-24-05-211. [Reserved]

33.1-24-05-212. [Reserved]

33.1-24-05-213. [Reserved]

33.1-24-05-214. [Reserved]

33.1-24-05-215. [Reserved]

33.1-24-05-216. [Reserved]

33.1-24-05-217. [Reserved]

33.1-24-05-218. [Reserved]

33.1-24-05-219. [Reserved]

33.1-24-05-220. [Reserved]

33.1-24-05-221. [Reserved]

33.1-24-05-222. [Reserved]

33.1-24-05-223. [Reserved]

33.1-24-05-224. [Reserved]

33.1-24-05-225. [Reserved]

33.1-24-05-226. [Reserved]

33.1-24-05-227. [Reserved]

33.1-24-05-228. [Reserved]

33.1-24-05-229. [Reserved]

33.1-24-05-230. Applicability and requirements for recyclable materials utilized for precious metal recovery.

1. Sections 33.1-24-05-230 through 33.1-24-05-234 apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these.
2. Persons who generate, transport, or store recyclable materials that are regulated under sections 33.1-24-05-230 through 33.1-24-05-234 are subject to the following requirements:
 - a. Notification requirements;
 - b. Sections 33.1-24-03-04 through 33.1-24-03-07 (for generators), sections 33.1-24-04-04 and 33.1-24-04-05 (for transporters), and sections 33.1-24-05-38 and 33.1-24-05-39 (for persons who store); and
 - c. For precious metals exported to or imported from designated organization for economic cooperation and development member countries for recovery, sections 33.1-24-03-50 through 33.1-24-03-59 and subsection 1 of section 33.1-24-05-02. For precious metals exported to or imported from non-organization for economic cooperation and development countries for recovery, sections 33.1-24-03-17 through 33.1-24-03-25 and section 33.1-24-03-30.
3. Persons who store recycled materials that are regulated under sections 33.1-24-05-230 through 33.1-24-05-234 must keep the following records to document that they are not accumulating these materials speculatively (as defined in subsection 3 of section 33.1-24-02-01):
 - a. Records showing the volume of these materials stored at the beginning of the calendar year;
 - b. The amount of these materials generated or received during the calendar year; and
 - c. The amount of materials remaining at the end of the calendar year.

4. Recyclable materials that are regulated under sections 33.1-24-05-230 through 33.1-24-05-234 that are accumulated speculatively (as defined in subsection 3 of section 33.1-24-02-01) are subject to all applicable provisions of chapters 33.1-24-03 through 33.1-24-07.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-231. [Reserved]

33.1-24-05-232. [Reserved]

33.1-24-05-233. [Reserved]

33.1-24-05-234. [Reserved]

33.1-24-05-235. Applicability and requirements of spent lead acid batteries being reclaimed.

1. For a facility that generates, collects, transports, stores, or regenerates lead-acid batteries for reclamation purposes, the facility may be exempt from certain hazardous waste management requirements. Use the following table to determine which requirements apply. Alternatively, a generator may choose to manage spent lead-acid batteries under the universal waste rules in sections 33.1-24-05-700 through 33.1-24-05-799.

<u>If the batteries:</u>	<u>And if you:</u>	<u>Then you:</u>	<u>And you:</u>
<u>(1) Will be reclaimed through regeneration (such as by electrolyte replacement).</u>		<u>Are exempt from chapters 33.1-24-03 (except for section 33.1-24-03-02), 33.1-24-04, 33.1-24-06, and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-599 and 33.1-24-05-800 through 33.1-24-05-929, and the notification requirements of section 33.1-24-03-03.</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02.</u>
<u>(2) Will be reclaimed other than through regeneration.</u>	<u>Generate, collect, or transport, or any combination of the above, these batteries.</u>	<u>Are exempt from chapters 33.1-24-03 (except for section 33.1-24-03-02), 33.1-24-04, 33.1-24-06, and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-249, 33.1-24-05-300 through 33.1-24-05-599, and 33.1-24-05-800 through 33.1-24-05-929, and the notification</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02, and the applicable provisions of sections 33.1-24-05-250 through 33.1-24-05-299.</u>

<u>(3) Will be reclaimed other than through regeneration.</u>	<u>Store these batteries but are not the claimer.</u>	<u>requirements of section 33.1-24-03-03.</u> <u>Are exempt from chapters 33.1-24-03 (except for section 33.1-24-03-02), 33.1-24-04, 33.1-24-06, and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-249, 33.1-24-05-300 through 33.1-24-05-599, and 33.1-24-05-800 through 33.1-24-05-929, and the notification requirements of section 33.1-24-03-03.</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02, and the applicable provisions of sections 33.1-24-05-250 through 33.1-24-05-299.</u>
<u>(4) Will be reclaimed other than through regeneration.</u>	<u>Store these batteries before you reclaim them.</u>	<u>Must comply with subsection 2 of section 33.1-24-05-235 and as appropriate other regulatory provisions in subsection 2 of section 33.1-24-06-235.</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02, and the applicable provisions of sections 33.1-24-05-250 through 33.1-24-05-299.</u>
<u>(5) Will be reclaimed other than through regeneration.</u>	<u>Do not store these batteries before you reclaim them.</u>	<u>Are exempt from chapters 33.1-24-03 (except for section 33.1-24-03-02), 33.1-24-04, 33.1-24-06, and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-249, 33.1-24-05-300 through 33.1-24-05-599, and 33.1-24-05-800 through 33.1-24-05-929, and the notification requirements of section 33.1-24-03-03.</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02, and the applicable provisions of sections 33.1-24-05-250 through 33.1-24-05-299.</u>
<u>(6) Will be reclaimed through regeneration or any other means.</u>	<u>Export these batteries for reclamation in a foreign country.</u>	<u>Are exempt from chapters 33.1-24-03 (except for section 33.1-24-03-02), 33.1-24-04, 33.1-24-06,</u>	<u>Are subject to chapter 33.1-24-02 and section 33.1-24-03-02, and either must comply with</u>

and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929, and the notification requirements of section 33.1-24-03-03, and except for the applicable requirements in either: (1) Sections 33.1-24-03-50 through 33.1-24-03-59; or (2) Section 33.1-24-03-20 "Notification of Intent to Export", subdivisions a through d and f of subsection 1 and subsection 2 of section 33.1-24-03-23 "Annual Reports", and section 33.1-24-03-24 "Recordkeeping."

sections 33.1-24-03-50 through 33.1-24-03-59 (if shipping to one of the organization for economic cooperation and development countries specified in subdivision a of subsection 1 of section 33.1-24-03-25, or must: (a) Comply with the requirements applicable to a primary exporter in section 33.1-24-03-20, subdivisions a through d and f of subsection 1 and subsection 2 of section 33.1-24-03-23 and section 33.1-24-03-24; (b) Export these batteries only upon consent of the receiving country and in conformance with the environmental protection agency acknowledgment of consent as defined in sections 33.1-24-03-17 through 33.1-24-03-25; and (c) Provide a copy of the environmental protection agency acknowledgment of consent for the shipment to the transporter transporting the shipment for export.

Must comply with applicable requirements in sections 33.1-24-03-50 through 33.1-24-03-59 (if shipping to one of the

(7) Will be reclaimed through regeneration or any other means.

Transport these batteries in the United States to export them for reclamation in a foreign country.

Are exempt from chapters 33.1-24-04, 33.1-24-06, and 33.1-24-07 and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-

05-800 through 33.1-24-05-929, and the notification requirements of section 33.1-24-03-03.

organization for economic cooperation and development countries specified in subdivision a of subsection 1 of section 33.1-24-03-25, or must comply with the following: (a) May not accept a shipment if the shipment does not conform to the environmental protection agency acknowledgment of consent; (b) Must ensure that a copy of the environmental protection agency acknowledgment of consent accompanies the shipment; and (c) Must ensure that the shipment is delivered to the facility designated by the person initiating the shipment.

2. For a facility that stores spent lead-acid batteries before reclamation but not through regeneration, the facility is subject to the following requirements:

a. Notification under section 33.1-24-03-03.

b. All applicable provisions in sections 33.1-24-05-01 through 33.1-24-05-143, and sections 33.1-24-05-950 through 33.1-24-05-1149, except sections 33.1-24-05-04, 33.1-24-05-38, and 33.1-24-05-39.

c. All applicable regulations in chapters 33.1-24-06 and 33.1-24-07.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-236. [Reserved]

33.1-24-05-237. [Reserved]

33.1-24-05-238. [Reserved]

33.1-24-05-239. [Reserved]

33.1-24-05-240. [Reserved]

33.1-24-05-241. [Reserved]

33.1-24-05-242. [Reserved]

33.1-24-05-243. [Reserved]

33.1-24-05-244. [Reserved]

33.1-24-05-245. [Reserved]

33.1-24-05-246. [Reserved]

33.1-24-05-247. [Reserved]

33.1-24-05-248. [Reserved]

33.1-24-05-249. [Reserved]

33.1-24-05-250. Purpose, scope, and applicability to land disposal restrictions.

1. Sections 33.1-24-05-250 through 33.1-24-05-299 identify hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.
2. Except as specifically provided otherwise in sections 33.1-24-05-250 through 33.1-24-05-299 or chapter 33.1-24-02, the requirements of sections 33.1-24-05-250 through 33.1-24-05-299 apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.
3. Restricted wastes may continue to be land disposed as follows:
 - a. Where persons have been granted an extension from the effective date of a prohibition under sections 33.1-24-05-266 through 33.1-24-05-279 or pursuant to section 33.1-24-05-254, with respect to those wastes covered by the extension;
 - b. Where persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under sections 33.1-24-05-250 through 33.1-24-05-299, or 40 CFR part 148, are not prohibited if the wastes:
 - (1) Are disposed into a nonhazardous or hazardous injection well as defined in 40 CFR 144.6(a); and
 - (2) Do not exhibit any prohibited characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14 at the point of injection; or
 - d. Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under sections 33.1-24-05-250 through 33.1-24-05-299, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in section 33.1-24-05-280, or are D003 reactive cyanide:
 - (1) The wastes are managed in a treatment system which subsequently discharges to waters of the United States pursuant to a permit issued under section 402 of the Clean Water Act;

(2) The wastes are treated for purposes of the pretreatment requirements of section 307 of the Clean Water Act; or

(3) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in subsection 1 of section 33.1-24-05-277; and

(4) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (for example, placement in a surface impoundment).

4. The requirements of sections 33.1-24-05-250 through 33.1-24-05-299 do not affect the availability of a waiver under section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

5. The following hazardous wastes are not subject to any provision of sections 33.1-24-05-250 through 33.1-24-05-299:

a. Waste generated by small quantity generators of less than one hundred kilograms of nonacute hazardous waste or less than one kilogram of acute hazardous waste per month, as defined in section 33.1-24-02-05.

b. Waste pesticides that a farmer disposes of pursuant to section 33.1-24-03-40.

c. Wastes identified or listed as hazardous after November 8, 1984, for which the department has not promulgated land disposal prohibitions or treatment standards.

d. De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (for example, spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one percent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

6. Universal waste handlers and universal waste transporters, as defined in section 33.1-24-01-04, are exempt from sections 33.1-24-05-256 and 33.1-24-05-290 for the wastes listed below. These handlers are subject to regulation under sections 33.1-24-05-700 through 33.1-24-05-799.

a. Batteries as described in section 33.1-24-05-702;

b. Pesticides as described in section 33.1-24-05-703;

c. Mercury containing equipment as described in section 33.1-24-05-704; and

d. Lamps as described in section 33.1-24-05-705.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-251. Definitions applicable to sections 33.1-24-05-250 through 33.1-24-05-299.

When used in sections 33.1-24-05-250 through 33.1-24-05-299, the following terms have the meanings given below:

1. "Debris" means solid material exceeding a sixty millimeter particle size that is intended for disposal and that is a manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in sections 33.1-24-05-280 through 33.1-24-05-289, namely lead-acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least seventy-five percent of their original volume. A mixture of debris that has not been treated to the standards provided by section 33.1-24-05-285 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.
2. "Halogenated organic compounds or HOCs" mean those compounds having a carbon-halogen bond.
3. "Hazardous constituent or constituents" means those constituents listed in appendix V to chapter 33.1-24-02.
4. "Hazardous debris" means debris that contains a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19, or that exhibits a characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (for example, from waste to hazardous debris) is not allowed under the dilution prohibition in section 33.1-24-05-252.
5. "Inorganic metal-bearing waste" is a waste for which the environmental protection agency has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in subdivision a of subsection 3 of section 33.1-24-05-252, and is specifically listed in appendix XXIX of chapter 33.1-24-05.
6. "Land disposal" means placement in or on the land, except in a corrective action management unit or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.
7. "Nonwastewaters" are wastes that do not meet the criteria for wastewaters in subsection 11.
8. "Polychlorinated biphenyls or PCBs" are halogenated organic compounds defined in accordance with 40 CFR 761.3.
9. "Soil" means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the United States Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges, or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (for example, from waste to contaminated soil) is not allowed under the dilution prohibition in section 33.1-24-05-252.

10. "Underlying hazardous constituent" means any constituent listed in section 33.1-24-05-288, table universal treatment standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific universal treatment standards treatment standard.
11. "Wastewaters" are wastes that contain less than one percent by weight total organic carbon (TOC) and less than one percent by weight total suspended solids.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-252. Dilution prohibited as a substitute for treatment.

1. Except as provided in subsection 2, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with sections 33.1-24-05-280 through 33.1-24-05-289, to circumvent the effective date of a prohibition in sections 33.1-24-05-266 through 33.1-24-05-279, to otherwise avoid a prohibition in sections 33.1-24-05-266 through 33.1-24-05-279, or to circumvent a land disposal prohibition imposed by Resource Conservation and Recovery Act section 3004.
2. Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act, or which treat wastes in a Clean Water Act-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the Clean Water Act is not impermissible dilution for purposes of this section unless a method other than DEACT has been specified in section 33.1-24-05-280 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.
3. Combustion of the hazardous waste codes listed in appendix XXIX is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria, unless otherwise specifically prohibited from combustion:
- a. The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard specified in section 33.1-24-05-288;
 - b. The waste consists of organic, debris-like materials (for example, wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;
 - c. The waste, at point of generation, has reasonable heating value such as greater than or equal to five thousand British thermal units per pound;
 - d. The waste is cogenerated with wastes for which combustion is a required method of treatment;
 - e. The waste is subject to requirements necessitating reduction of organics, including biological agents; or
 - f. The waste contains greater than one percent total organic carbon (TOC).
4. It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal

restriction treatment standard for lead. Lead-containing wastes include D008 wastes (wastes exhibiting a characteristic due to the presence of lead), all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-253. Treatment surface impoundment exemption.

1. Wastes which are otherwise prohibited from land disposal under sections 33.1-24-05-250 through 33.1-24-05-299 may be treated in a surface impoundment or series of impoundments provided that:

a. Treatment of such wastes occurs in the impoundments.

b. The following conditions are met:

(1) Sampling and testing. For wastes with treatment standards in sections 33.1-24-05-280 through 33.1-24-05-289 and prohibition levels in sections 33.1-24-05-266 through 33.1-24-05-279, or both, or Resource Conservation and Recovery Act section 3004(d), the residues from treatment are analyzed, as specified in section 33.1-24-05-256 or 33.1-24-05-272, to determine if the wastes meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under section 33.1-24-05-04, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

(2) Removal. The following treatment residues (including any liquid waste) must be removed at least annually; residues which do not meet the treatment standards promulgated under sections 33.1-24-05-280 through 33.1-24-05-289; residues which do not meet the prohibition levels established under sections 33.1-24-05-266 through 33.1-24-05-279 or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under sections 33.1-24-05-266 through 33.1-24-05-279 (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under section 33.1-24-01-08. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flowthrough constitutes removal of the supernatant for the purpose of this requirement.

(3) Subsequent management. Treatment residues may not be placed in any other surface impoundment for subsequent management.

(4) Recordkeeping. Sampling and testing and recordkeeping provisions of section 33.1-24-05-04 apply.

c. The impoundment meets the design requirements of subsection 3 of section 33.1-24-05-119, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of sections 33.1-24-05-47 through 33.1-24-05-58 unless:

(1) Exempted pursuant to subsection 4 or 5 of section 33.1-24-05-119;

(2) Upon application by the owner or operator, the department, after notice and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

(a) Has at least one liner, for which there is no evidence that such liner is leaking;

(b) Is located more than one-quarter mile [402.3 meters] from an underground source of drinking water; and

(c) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or

(3) Upon application by the owner or operator, the department, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

d. The owner or operator submits to the department a written certification that the requirements of subdivision c of subsection 1 have been met. The following certification is required:

I certify under penalty of law that the requirements of subdivision c of subsection 1 of section 33.1-24-05-253 have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

2. Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-254. Procedures for case-by-case extensions to an effective date.

1. Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the administrator for an extension to the effective date of any applicable restriction established under sections 33.1-24-05-266 through 33.1-24-05-279. The applicant shall demonstrate the following:

a. The applicant has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage the applicant's waste in accordance with the effective date of the applicable restrictions established under sections 33.1-24-05-266 through 33.1-24-05-279;

b. The applicant has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery, (for example, recycling), or disposal capacity that meets the treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289 or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment;

c. Due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

d. The capacity being constructed or otherwise provided by the applicant will be sufficient to manage the entire quantity of waste that is the subject of the application;

e. The applicant provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;

f. The applicant has arranged for adequate capacity to manage the applicant's waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and

g. Any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of subdivision b of subsection 8.

2. An authorized representative signing an application described under subsection 1 shall make the following certification: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

3. After receiving an application for an extension, the administrator may request any additional information which the administrator deems as necessary to evaluate the application.

4. An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility.

5. On the basis of the information referred to in subsection 1, after notice and opportunity for comment, and after consultation with appropriate state agencies in all affected states, the administrator may grant an extension of up to one year from the effective date. The administrator may renew this extension for up to one additional year upon the request of the applicant if the demonstration required in subsection 1 can still be made. In no event will an extension extend beyond twenty-four months from the applicable effective date specified in sections 33.1-24-05-266 through 33.1-24-05-279. The length of any extension authorized will be determined by the administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in subdivision e of subsection 1. The administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the federal register.

6. Any person granted an extension under this section shall immediately notify the administrator as soon as that person has knowledge of any change in the conditions certified to in the application.

7. Any person granted an extension under this section shall submit written progress reports at intervals designated by the administrator. Such reports must describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery, or disposal capacity; must identify any event which may cause or has caused a delay in the development of the capacity; and must summarize the steps taken to mitigate the delay. The administrator can revoke an extension at any time if the applicant does not demonstrate a good-faith effort to meet

the schedule for completion, if the environmental protection agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of this article.

8. When the administrator establishes an extension to an effective date under this section, during the period for which such extension is in effect:

a. The storage restrictions under subsection 1 of section 33.1-24-05-290 do not apply; and

b. Such hazardous waste may be disposed in a landfill or surface impoundment only if such unit is in compliance with the technical requirements of the following provisions regardless of whether such unit is existing, new, or a replacement or lateral expansion.

(1) The landfill, if in interim status, is in compliance with the applicable requirements of subsection 5 of section 33.1-24-06-16;

(2) The landfill, if permitted, is in compliance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58 and subsections 3, 4, and 5 of section 33.1-24-05-177;

(3) The surface impoundment, if in interim status, is in compliance with the applicable requirements of subsection 5 of section 33.1-24-06-16, and Resource Conservation and Recovery Act section 3005(j)(1);

(4) The surface impoundment, if permitted, is in compliance with the requirements of sections 33.1-24-05-47 through 33.1-24-05-58 and subsections 3, 4, and 5 of section 33.1-24-05-119;

(5) The surface impoundment, if newly subject to Resource Conservation and Recovery Act section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subsection 5 of section 33.1-24-06-16 (subpart F of 40 CFR part 265) within twelve months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of subsection 5 of section 33.1-24-06-16 (40 CFR section 265.221 (a), (c), and (d)) within forty-eight months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to Resource Conservation and Recovery Act section 3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subsection 5 of section 33.1-24-06-16 (subpart F of 40 CFR part 265) within twelve months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of subsection 5 of section 33.1-24-06-16 (40 CFR section 265.221 (a), (c), and (d)) within forty-eight months after the promulgation of additional listings or characteristics of hazardous waste; or

(6) The landfill, if disposing of containerized liquid hazardous wastes containing polychlorinated biphenyls of concentrations greater than or equal to fifty parts per million but less than five hundred parts per million, is also in compliance with the requirements of 40 CFR 761.75 and this article.

9. Pending a decision on an application, the applicant is required to comply with all restrictions on land disposal under sections 33.1-24-05-250 through 33.1-24-05-299 once the effective date for the waste has been reached.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

33.1-24-05-255. Petitions to allow land disposal of a waste prohibited under sections 33.1-24-05-266 through 33.1-24-05-279.

1. Any person seeking an exemption from a prohibition under sections 33.1-24-05-266 through 33.1-24-05-279 for the disposal of a restricted hazardous waste in a particular unit or units shall submit a petition to the administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration must include the following components:

- a. An identification of the specific waste and the specific unit for which the demonstration will be made;
- b. A waste analysis to describe fully the chemical and physical characteristics of the subject waste;
- c. A comprehensive characterization of the disposal unit site including an analysis of background air, soil, and water quality;
- d. A monitoring plan that detects migration at the earliest practicable time; and
- e. Sufficient information to assure the administrator that the owner or operator of a land disposal unit receiving restricted wastes will comply with other applicable federal, state, and local laws.

2. The demonstration referred to in subsection 1 must meet the following criteria:

- a. All waste and environmental sampling, test, and analysis data must be accurate and reproducible to the extent that state of the art techniques allow;
- b. All sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters must have been approved by the administrator;
- c. Simulation models must be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements;
- d. A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the administrator; and
- e. An analysis must be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena.

3. Each petition referred to in subsection 1 must include the following:

- a. A monitoring plan that describes the monitoring program installed at or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan must provide information on the monitoring of the unit or the environment around the unit, or both. The following specific information must be included in the plan:
 - (1) The media monitored in the cases where monitoring of the environment around the unit is required;

- (2) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
 - (3) The location of the monitoring station;
 - (4) The monitoring interval (frequency of monitoring at each station);
 - (5) The specific hazardous constituents to be monitored;
 - (6) The implementation schedule for the monitoring program;
 - (7) The equipment used at the monitoring station;
 - (8) The sampling and analytical techniques employed; and
 - (9) The data recording and reporting procedures.
- b. Where applicable, the monitoring program described in subdivision a must be in place for a period of time specified by the administrator, as part of the administrator's approval of the petition, prior to receipt of prohibited waste at the unit.
 - c. The monitoring data collected according to the monitoring plan specified under subdivision a must be sent to the administrator according to a format and schedule specified and approved in the monitoring plan.
 - d. A copy of the monitoring data collected under the monitoring plan specified under subdivision a must be kept onsite at the facility in the operating record.
 - e. The monitoring program specified under subdivision a meets the following criteria:
 - (1) All sampling, testing, and analytical data must be approved by the administrator and must provide data that is accurate and reproducible.
 - (2) All estimation and monitoring techniques must be approved by the administrator.
 - (3) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the administrator.
4. Each petition must be submitted to the administrator.
 5. After a petition has been approved, the owner or operator must report any changes in conditions at the unit or the environment around the unit, or both, that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the units as follows:
 - a. If the owner or operator plans to make changes to the unit design, construction, or operation, such a change must be proposed in writing and the owner or operator must submit a demonstration to the administrator at least thirty days prior to making the change. The administrator will determine whether the proposed change invalidates the terms of the petition and will determine the appropriate response. Any change must be approved by the administrator prior to being made.
 - b. If the owner or operator discovers that a condition at the site which was modeled or predicted in the petition does not occur as predicted, this change must be reported, in writing, to the administrator within ten days of discovering the change. The administrator will determine whether the reported change from the terms of the petition requires further

action which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses.

6. If the owner or operator determines that there is migration of hazardous constituents from the unit, the owner or operator must:
 - a. Immediately suspend receipt of prohibited waste at the unit; and
 - b. Notify the administrator in writing, within ten days of the determination that a release has occurred.
 - c. Following receipt of the notification the administrator will determine, within sixty days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The administrator shall also determine whether further examination of any migration is warranted under applicable provisions of chapter 33.1-24-05.
7. Each petition must include the following statement signed by the petitioner or an authorized representative: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.
8. After receiving a petition, the administrator may request any additional information that reasonably may be required to evaluate the demonstration.
9. If approved, the petition will apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.
10. The administrator will give public notice in the federal register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the federal register.
11. The term of a petition granted under this section may be no longer than the term of the hazardous waste permit if the disposal unit is operating under a hazardous waste permit, or up to a maximum of five years from the date of approval provided under subsection 7 if the unit is operating under interim status. In either case, the term of the granted petition expires upon the termination or denial of a hazardous waste permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.
12. Prior to the administrator's decision, the applicant is required to comply with all restrictions on land disposal under sections 33.1-24-05-250 through 33.1-24-05-299 once the effective date for the waste has been reached.
13. The petition granted by the administrator does not relieve the petitioner of the petitioner's responsibility in the management of hazardous waste under chapters 33.1-24-01 through 33.1-24-07.
14. Liquid hazardous wastes containing polychlorinated biphenyls of concentrations greater than or equal to five hundred parts per million are not eligible for an exemption under this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-256. Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.

1. Requirements for generators:

a. A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in section 33.1-24-05-280, or section 33.1-24-05-285, or section 33.1-24-05-289. This determination can be made concurrently with the hazardous waste determination required in section 33.1-24-03-02, in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as referenced in section 33.1-24-01-05, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. (Alternatively, the generator must send the waste to a hazardous waste permitted treatment facility, where the waste treatment facility must comply with the requirements of section 33.1-24-05-04 and subsection 2.) In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in section 33.1-24-05-280 and are described in detail in section 33.1-24-05-282, table 1. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of section 33.1-24-05-258 in addition to any applicable requirements in this section.

b. If the waste or contaminated soil does not meet the treatment standards, or if the generator chooses not to make the determination of whether the generator's waste must be treated, with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste and place a copy in the file. The notice must include the information in column "subdivision b" of the generator paperwork requirements table in subdivision d. (Alternatively, if the generator chooses not to make the determination of whether the waste must be treated, the notification must include the hazardous waste numbers and manifest number of the first shipment and must state "This hazardous waste may or may not be subject to the land disposal restrictions treatment standards. The treatment facility must make the determination".) No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

(1) For contaminated soil, the following certification statement should be included, signed by an authorized representative:

I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by subsection 3 of section 33.1-24-05-289.

(2) [Reserved]

c. If the waste or contaminated soil meets the treatment standard at the original point of generation:

(1) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste and place a copy in the file. The notice must include the information indicated in column "subdivision c" of the generator paperwork requirements table in subdivision d of subsection 1 and the following certification statement, signed by an authorized representative:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(2) For contaminated soil, with the initial shipment of wastes to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice must include the information in column "subdivision c" of the generator paperwork requirements table in subdivision d of subsection 1.

(3) If the waste changes, the generator must send a new notice and certification to the receiving facility and place a copy in its files. Generators of hazardous debris excluded from the definition of hazardous waste under subsection 5 of section 33.1-24-02-03 are not subject to these requirements.

d. For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under section 33.1-24-05-254, disposal in a no-migration unit under section 33.1-24-05-255, or a national capacity variance or case-by-case capacity variance under sections 33.1-24-05-266 through 33.1-24-05-279. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column "subdivision d" of the generator paperwork requirements table. If the waste changes, the generator must send a new notice to the receiving facility and place a copy in its files.

Generator Paperwork Requirements Table

Required Information*	Subdivision b	Subdivision c	Subdivision d	Subdivision i
1. <u>Environmental protection agency hazardous waste numbers and manifest number of first shipment.</u>	√	√	√	√
2. <u>Statement: This waste is not prohibited from land disposal.</u>			√	
3. <u>The waste is subject to the land disposal restrictions. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need</u>	√	√		

Generator Paperwork Requirements Table

<u>Required Information*</u>	<u>Subdivision b</u>	<u>Subdivision c</u>	<u>Subdivision d</u>	<u>Subdivision i</u>
<u>to put them all on the land disposal restriction notice.</u>				
<u>4. The notice must include the applicable wastewater/nonwastewater category (see subsections 7 and 11 of section 33.1-24-05-251) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide).</u>	√	√		
<u>5. Waste analysis data (when available).</u>	√	√	√	
<u>6. Date the waste is subject to the prohibition.</u>			√	
<u>7. For hazardous debris, when treating with the alternative treatment technologies provided by section 33.1-24-05-285, the contaminants subject to treatment, as described in subsection 2 of section 33.1-24-05-285; and an indication that these contaminants are being treated to comply with section 33.1-24-05-285.</u>	√		√	
<u>8. For contaminated soil subject to land disposal restrictions as provided in subsection 1 of section 33.1-24-05-289, the constituents subject to treatment as described in subsection 4 of section 33.1-24-05-289, and the following statements: This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by subsection 3 of section 33.1-24-05-289 or the universal treatment standards.</u>	√	√		
<u>9. A certification is needed (see applicable section for exact wording).</u>			√	√

*Note: Information requirements referenced in the above table can be found in the indicated subdivision of subsection 1.

e. If a generator is managing and treating prohibited waste, or contaminated soil in tanks, containers, or containment buildings regulated under section 33.1-24-03-12 to meet applicable land disposal restriction treatment standards found at section 33.1-24-05-280, the generator must develop and follow a written waste analysis plan which describes the procedures the generator will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of table 1, section 33.1-24-05-285, however, are not subject to these waste analysis requirements.) The plan must be kept onsite in the generator's records, and the following requirements must be met:

(1) The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste or wastes being treated and contain all information necessary to treat the waste or wastes in accordance with the

requirements of sections 33.1-24-05-250 through 33.1-24-05-299, including the selected testing frequency.

(2) Such plan must be kept in the facility's onsite files and made available to inspectors.

(3) Wastes shipped offsite pursuant to this subdivision must comply with the notification requirements of subdivision c.

f. If a generator determines that the waste, or contaminated soil, is restricted based solely on the generator's knowledge of the waste, all supporting data used to make this determination must be retained onsite in the generator's files. If a generator determines that the waste or contaminated soil is restricted based on testing this waste or an extract developed using the test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, incorporated by reference in section 33.1-24-01-05, and all waste analysis data must be retained onsite in the generator's files.

g. If a generator determines that the generator is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from hazardous waste regulation under sections 33.1-24-02-02 through 33.1-24-02-06 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act, as specified at subdivision b of subsection 1 of section 33.1-24-02-04 or that are Clean Water Act-equivalent, or are managed in an underground injection well regulated by the Safe Drinking Water Act), the generator must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from hazardous waste regulation, and the disposition of the waste, in the facility's onsite files.

h. Generators must retain onsite a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to onsite or offsite treatment, storage, or disposal. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department. The requirements of this subsection apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under sections 33.1-24-02-02 through 33.1-24-02-06, or exempted from hazardous waste regulation, subsequent to the point of generation.

i. If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at subsection 3 of section 33.1-24-05-282:

(1) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column "subdivision i" in the generator paperwork requirements table of subdivision d, and the following certification. The certification, which must be signed by an authorized representative and must be placed in the generator's files, must say the following:

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under appendix VIII to chapter 33.1-24-05 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at subsection 3 of section 33.1-24-05-282. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

(2) No further notification is necessary until such time that the wastes in the lab pack change, or the receiving facility changes, in which case a new notice and certification must be sent and a copy placed in the generator's file.

(3) If the lab pack contains characteristic hazardous wastes (D001-D043), underlying hazardous constituents (as defined in subsection 10 of section 33.1-24-05-251) need not be determined.

(4) The generator must also comply with the requirements in subdivisions f and g.

i. Small quantity generators with tolling agreements pursuant to subsection 5 of section 33.1-24-03-04 must comply with the applicable notification and certification requirements of subsection 1 for the initial shipment of the waste subject to the agreement. Such generators must retain onsite a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

2. Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by section 33.1-24-05-04 for permitted facilities or the applicable requirements of subsection 5 of section 33.1-24-06-16 for interim status facilities. Such testing must be performed as provided in subdivisions a, b, and c.

a. For wastes or contaminated soil with treatment standards expressed in the waste extract (toxicity characteristic leaching procedure), the owner or operator of the treatment facility must test an extract of the treatment residues, using test method 1311 (the toxicity characteristic leaching procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05) to assure that the treatment residues extract meet the applicable treatment standards.

b. For wastes or contaminated soil with treatment standards expressed as concentrations in the waste, the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that they meet the applicable treatment standards.

c. A one-time notice must be sent with the initial shipment of waste or contaminated soil to the land disposal facility. A copy of the notice must be placed in the treatment facility's file.

(1) No further notification is necessary until such time that the waste or receiving facility change, in which case a new notice must be sent and a copy placed in the treatment facility's file.

(2) The one-time notice must include these requirements:

<u>Treatment Facility Paperwork Requirements Table</u>	
<u>Required Information</u>	<u>Subsection 2</u>
<u>1. Hazardous waste number or numbers and manifest number of first shipment.</u>	<u>√</u>
<u>2. The waste is subject to the land disposal restrictions. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored</u>	<u>√</u>

<u>for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the land disposal restriction notice.</u>	
<u>3. The notice must include the applicable wastewater/nonwastewater category (see subsections 7 and 11 of section 33.1-24-05-251), and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanides).</u>	<u>√</u>
<u>4. Waste analysis data (when available).</u>	<u>√</u>
<u>5. For contaminated soil subject to land disposal restrictions as provided in subsection 1 of section 33.1-24-05-289, the constituents subject to treatment as described in subsection 4 of section 33.1-24-05-289, and the following statement: "This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by subsection 3 of section 33.1-24-05-289."</u>	<u>√</u>
<u>6. A certification is needed (see applicable section for exact wording).</u>	<u>√</u>

- d. The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. The certification must state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in section 33.1-24-05-280 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

A certification is also necessary for contaminated soil and it must state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in section 33.1-24-05-289 without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

- (1) A copy of the certification must be placed in the treatment facility's onsite files. If the waste or treatment residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

- (2) Debris excluded from the definition of hazardous waste under subsection 5 of section 33.1-24-02-03 (for example, debris treated by an extraction or destruction technology provided by table 1, section 33.1-24-05-285, and debris that the department has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of subsection 4 rather than the certification requirements of this subsection.

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- (3) For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in subsection 4 of section 33.1-24-05-280, the certification, signed by an authorized representative, must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in section 33.1-24-05-282, table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for such constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

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- (4) For characteristic wastes that are subject to the treatment standards in section 33.1-24-05-280 (other than those expressed as a method of treatment), or section 33.1-24-05-289, and that contain underlying hazardous constituents as defined in subsection 10 of section 33.1-24-05-251; if these wastes are treated onsite to remove the hazardous characteristic; and are then sent offsite for treatment of underlying hazardous constituents, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of section 33.1-24-05-280 or 33.1-24-05-289 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

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- (5) For characteristic wastes that contain underlying hazardous constituents as defined subsection 10 of section 33.1-24-05-251 that are treated onsite to remove the hazardous characteristic to treat underlying hazardous constituents to levels in section 33.1-24-05-288 universal treatment standards, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of section 33.1-24-05-280 to remove the hazardous characteristic and that underlying hazardous constituents, as defined in subsection 10 of section 33.1-24-05-251 have been treated onsite to meet the section 33.1-24-05-288 universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

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- e. If the waste or treatment residue will be further managed at a different treatment, storage, or disposal facility, the treatment, storage, or disposal facility sending the waste or treatment residue offsite must comply with the notice and certification requirements applicable to generators under this section.

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- f. Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of subsection 2 of section 33.1-24-05-201 regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (the recycler) must, for the initial shipment of waste, prepare a one-time certification described in subdivision d, and a one-time notice which includes the information listed in subdivision c (except the manifest number). The certification and notification must be placed in the facility's onsite files. If the waste or the receiving facility changes, a new certification and notification must

be prepared and placed in the onsite files. In addition, the recycling facility must also keep records of the name and location of each entity receiving the hazardous waste-derived product.

3. Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to subsection 2 of section 33.1-24-05-201, the owner or operator of any land disposal facility disposing any waste subject to restrictions under sections 33.1-24-05-250 through 33.1-24-05-299 must:

a. Have copies of the notice and certifications specified in subsection 1 or 2.

b. Test the waste, or an extract of the waste or treatment residue developed using test method 1311 (the toxicity characteristic leaching procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in sections 33.1-24-05-280 through 33.1-24-05-289. Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by section 33.1-24-05-04, or the applicable requirements of subsection 5 of section 33.1-24-06-16 for interim status facilities.

4. Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under subsection 5 of section 33.1-24-02-03 (for example, debris treated by an extraction or destruction technology provided by table 1 in section 33.1-24-05-285, and debris that the department has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

a. A one-time notification, including the following information, must be submitted to the department:

(1) The name and address of the nonhazardous waste facility receiving the treated debris;

(2) A description of the hazardous debris as initially generated, including the applicable hazardous waste numbers; and

(3) For debris excluded under subdivision a of subsection 5 of section 33.1-24-02-03, the technology from table 1, section 33.1-24-05-285, used to treat the debris.

b. The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under subdivision a of subsection 5 of section 33.1-24-02-03, if a different type of debris is treated or if a different technology is used to treat the debris.

c. For debris excluded under subdivision a of subsection 5 of section 33.1-24-02-03, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of table 1 in section 33.1-24-05-285, as follows:

(1) Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

(2) Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

(3) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following:

I certify under penalty of law that the debris has been treated in accordance with the requirements of section 33.1-24-05-285. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment.

5. Generators and treaters who first receive from the department a determination that a given contaminated soil subject to the land disposal restrictions as provided in subsection 1 of section 33.1-24-05-289 no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to the land disposal restrictions as provided in subsection 1 of section 33.1-24-05-289 no longer exhibits a characteristic of hazardous waste must:

a. Prepare a one-time only documentation of these determinations, including all supporting information; and

b. Maintain that information in the facility files and other records for a minimum of three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-257. [Reserved]

33.1-24-05-258. Special rules regarding wastes that exhibit a characteristic.

1. The initial generator of a solid waste must determine each hazardous waste number (waste code) applicable to the waste in order to determine the applicable treatment standards under sections 33.1-24-05-280 through 33.1-24-05-289. This determination may be made concurrently with the hazardous waste determination required in section 33.1-24-03-02. For purposes of sections 33.1-24-05-250 through 33.1-24-05-299, the waste will carry the waste code for any applicable listed waste (sections 33.1-24-02-15 through 33.1-24-02-19). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (sections 33.1-24-02-10 through 33.1-24-02-14), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in subsection 2. If the generator determines that the generator's waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, or POLYM of section 33.1-24-05-282, table 1), the generator must determine the underlying hazardous constituents (as defined at subsection 10 of section 33.1-24-05-251) in the characteristic waste.

2. Where a prohibited waste is both listed under sections 33.1-24-02-15 through 33.1-24-02-19 and exhibits a characteristic under sections 33.1-24-02-10 through 33.1-24-02-14, the treatment standard for the waste code listed in sections 33.1-24-02-15 through 33.1-24-02-19 will operate in lieu of the standard for the waste code under sections 33.1-24-02-10 through 33.1-24-02-14 provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

3. In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under sections 33.1-24-02-10 through 33.1-24-02-14 may be land disposed unless the waste complies with the treatment standards under sections 33.1-24-05-280 through 33.1-24-05-289.

4. Wastes that exhibit a characteristic are also subject to section 33.1-24-05-256 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must

be placed in the generator's or treater's onsite files. The notification and certification must be updated if the process or operation generating the waste changes or if the permitted nonhazardous facility receiving the waste changes, or both change.

a. The notification must include the following information:

(1) The name and address of the permitted nonhazardous facility receiving the waste shipment; and

(2) A description of the waste as initially generated, including the applicable codes, treatability groups, and underlying hazardous constituents (as defined in subsection 10 of section 33.1-24-05-251), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

b. The certification must be signed by an authorized representative and must state the language specified in subdivision d of subsection 2 of section 33.1-24-05-256.

(1) If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in paragraph 4 of subdivision d of subsection 2 of section 33.1-24-05-256 applies.

(2) [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-259. [Reserved]

33.1-24-05-260. [Reserved]

33.1-24-05-261. [Reserved]

33.1-24-05-262. [Reserved]

33.1-24-05-263. [Reserved]

33.1-24-05-264. [Reserved]

33.1-24-05-265. Surface impoundment exemptions.

1. This section defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

2. Wastes that are newly identified or listed under section 3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to article 33.1-24 as a result of the additional identification or listing, may continue to be stored in the surface impoundment for forty-eight months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of subsection 5 of section 33.1-24-06-16 (subpart F of part 265 of 40 CFR) within twelve months after promulgation of the new listing or characteristic.

3. Wastes that are newly identified or listed under section 3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to article 33.1-24 as a result of the

additional identification or listing, may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of subsection 5 of section 33.1-24-06-16 (subpart F of part 265 of 40 CFR) within twelve months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after forty-eight months from promulgation of the additional listing or characteristic, it must then be in compliance with section 33.1-24-05-253.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-266. Waste specific prohibitions - Dyes or pigments, or both, production wastes.

1. Effective August 23, 2005, the waste specified in chapter 33.1-24-02 as hazardous waste number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.
2. The requirements of subsection 1 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;
 - b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. The wastes meet the applicable treatment standards established pursuant to a petition granted under section 33.1-24-05-284;
 - d. Hazardous debris has met the treatment standards in section 33.1-24-05-280, or the alternative treatment standards in 33.1-24-05-285; or
 - e. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.
3. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract, or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract, or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable sections 33.1-24-05-280 through 33.1-24-05-289 levels, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-267. [Reserved]

33.1-24-05-268. [Reserved]

33.1-24-05-269. [Reserved]

33.1-24-05-270. Waste specific prohibitions - Wood preserving wastes.

1. Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in chapter 33.1-24-02 as hazardous waste numbers F032, F034, and F035.
2. Effective May 12, 1999, the following wastes are prohibited from land disposal: soil and debris contaminated with F032, F034, F035; and radioactive wastes mixed with hazardous waste numbers F032, F034, and F035.
3. Between May 12, 1997, and May 12, 1999, soil and debris contaminated with F032, F034, F035 and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in subdivision b of subsection 8 of section 33.1-24-05-254.
4. The requirements of subsections 1 and 2 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;
 - b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under section 33.1-24-05-284; or
 - d. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to those wastes covered by the extension.
5. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable universal treatment standards levels of section 33.1-24-05-288, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-271. Waste specific prohibitions - Dioxin-containing wastes.

1. Effective November 8, 1988, the dioxin-containing wastes specified in section 33.1-24-02-16 as hazardous waste numbers F020, F021, F022, F023, F026, F027, and F028 are prohibited from land disposal unless the F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 or a corrective action taken under article 33.1-24.
2. Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in subsection 1 are prohibited from land disposal.
3. Between November 8, 1988, and November 8, 1990, wastes included in subsection 1 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the

requirements specified in subdivision b of subsection 8 of section 33.1-24-05-254 and all other applicable requirements of chapter 33.1-24-05.

4. The requirements of subsections 1 and 2 do not apply if:

a. The wastes meet the standards of sections 33.1-24-05-280 through 33.1-24-05-289;

b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition; or

c. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to those wastes covered by the extension.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-272. Waste specific prohibitions - Soils exhibiting the toxicity characteristic for metals and containing polychlorinated biphenyls.

1. Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004 through D011) and containing polychlorinated biphenyls.

2. The requirements of subsection 1 do not apply if:

a. The wastes:

(1) Contain halogenated organic compounds in total concentration less than one thousand milligrams per kilogram; and

(2) Meet the treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289 for hazardous waste numbers D004 through D011, as applicable;

b. The wastes:

(1) Contain halogenated organic compounds in total concentration less than one thousand milligrams per kilogram; and

(2) Meet the alternative treatment standards specified in section 33.1-24-05-289 for contaminated soil;

c. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition; or

d. The wastes meet applicable alternative treatment standards established pursuant to a petition granted under section 33.1-24-05-284.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-273. Waste specific prohibitions - Chlorinated aliphatic wastes.

1. Effective May 8, 2001, the wastes specified in chapter 33.1-24-02 as hazardous waste numbers K174 and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with

these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

2. The requirements of subsection 1 do not apply if:

a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;

b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;

c. The wastes meet the applicable treatment standards established pursuant to a petition granted under section 33.1-24-05-284;

d. Hazardous debris has met the treatment standards in section 33.1-24-05-280 or the alternative treatment standards in section 33.1-24-05-285; or

e. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.

3. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of sections 33.1-24-05-280 through 33.1-24-05-289, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

4. Disposal of K175 wastes that have complied with all applicable section 33.1-24-05-280 treatment standards must also be macroencapsulated in accordance with section 33.1-24-05-285 table 1 unless the waste is placed in:

a. An article 33.1-24 monofill containing only K175 wastes that meet all applicable section 33.1-24-05-280 treatment standards; or

b. A dedicated article 33.1-24 landfill cell in which all other wastes being codisposed are at pH of 6.0 or less.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-274. Waste specific prohibitions - Toxicity characteristic metal wastes.

1. Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in chapter 33.1-24-02 as hazardous waste numbers D004 through D011 that are newly identified (for example, wastes, soil, or debris identified as hazardous by the toxic characteristic leaching procedure but not the extraction procedure), and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications at chapter 33.1-24-02.

2. Effective November 26, 1998, the following waste is prohibited from land disposal: slag from secondary lead smelting which exhibits the toxicity characteristic due to the presence of one or more metals listed in section 33.1-24-02-14.

3. Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004 through D011 wastes that are newly identified (for example, wastes, soil, or debris identified as hazardous by the toxic characteristic leaching procedure but not the extraction procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris.
4. Between May 26, 1998, and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004 through D011 wastes that are newly identified (for example, wastes, soil, or debris identified as hazardous by the toxicity characteristic leaching procedure but not the extraction procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in subsection 8 of section 33.1-24-05-254.
5. The requirements of subsections 1 and 2 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;
 - b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under section 33.1-24-05-284; or
 - d. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.
6. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable universal treatment standard levels of section 33.1-24-05-288, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-275. Waste specific prohibitions - Petroleum refining wastes.

1. Effective February 8, 1999, the wastes specified in chapter 33.1-24-02 as hazardous waste numbers K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.
2. The requirements of subsection 1 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;

- b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
- c. The wastes meet the applicable treatment standards established pursuant to a petition granted under section 33.1-24-05-284;
- d. Hazardous debris that has met treatment standards in section 33.1-24-05-280 or in the alternative treatment standards in section 33.1-24-05-285; or
- e. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.

- 3. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable universal treatment standard levels of section 33.1-24-05-288, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-276. Waste specific prohibitions - Inorganic chemical wastes.

- 1. Effective May 20, 2002, the wastes specified in chapter 33.1-24-02 as hazardous waste numbers K176, K177, and K178, and soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.
- 2. The requirements of subsection 1 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;
 - b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. The wastes meet the applicable treatment standards established pursuant to a petition granted under section 33.1-24-05-284;
 - d. Hazardous debris has met the treatment standards in section 33.1-24-05-280 or the alternative treatment standards in section 33.1-24-05-285; or
 - e. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.
- 3. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels provided in sections 33.1-24-05-280 through 33.1-24-05-289, the waste is prohibited from

land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-277. Waste specific prohibitions - Ignitable and corrosive characteristic wastes whose treatment standards were vacated.

1. Effective August 9, 1993, the wastes specified in section 33.1-24-02-11 as D001 (and is not in the high total organic compound ignitable liquids subcategory), and specified in section 33.1-24-02-12 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in Clean Water Act equivalent treatment before ultimate land disposal, are prohibited from land disposal. Clean Water Act equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation or sedimentation or both for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.
2. Effective February 10, 1994, the wastes specified in section 33.1-24-02-11 as D001 (and is not in the high total organic compound ignitable liquids subcategory), and specified in section 33.1-24-02-12 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as class V injection wells, that do not engage in Clean Water Act-equivalent treatment before injection, are prohibited from land disposal.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-278. Waste specific prohibitions - Newly identified organic toxicity characteristic wastes and newly listed coke byproduct and chlorotoluene production wastes.

1. Effective December 19, 1994, the wastes specified in section 33.1-24-02-17 as hazardous waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with hazardous waste numbers F037, F038, K107 through K112, K117, K118, K123 through K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012 through D043, K141 through K145, and K147 through K151 are prohibited from land disposal. The following wastes that are specified in section 33.1-24-02-14, table 1 as hazardous waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, and D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act, or that are zero discharges that do not engage in Clean Water Act-equivalent treatment before ultimate land disposal, or that are injected in class I deep wells regulated under the Safe Drinking Water Act, are prohibited from land disposal. Clean Water Act-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation or sedimentation, or both, for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.
2. On September 19, 1996, radioactive wastes that are mixed with D018 through D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act, or that inject in class I deep wells regulated under the Safe Drinking Water Act, or that are zero

dischargers that engage in Clean Water Act-equivalent treatment before ultimate land disposal, are prohibited from land disposal. Clean Water Act-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation or sedimentation, or both, for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies. Radioactive wastes mixed with K141 through K145, and K147 through K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

3. Between December 19, 1994, and September 19, 1996, the wastes included in subsection 2 may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in subdivision b of subsection 8 of section 33.1-24-05-254.

4. The requirements of subsections 1, 2, and 3 do not apply if:

a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;

b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;

c. The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under section 33.1-24-05-284; or

d. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.

5. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels found in sections 33.1-24-05-280 through 33.1-24-05-289, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-279. Waste specific prohibitions - Spent aluminum potliners; reactive; and carbamate wastes.

1. On July 8, 1996, the wastes specified in section 33.1-24-02-17 as hazardous waste numbers K156 through K159, and K161; and in section 33.1-24-02-18 as hazardous waste numbers P127, P128, P185, P188 through P192, P194, P196 through P199, P201 through P205, U271, U278 through U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409 through U411 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

2. On July 8, 1996, the wastes identified in section 33.1-24-02-13 as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act, or that inject in class I deep wells regulated under the Safe Drinking Water Act, or that are zero dischargers that engage in Clean Water Act-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other

explosive devices which have been the subject of an emergency response. (Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see section 33.1-24-05-280)).

3. On September 21, 1998, the wastes specified in section 33.1-24-02-17 as hazardous waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.
4. On April 8, 1998, radioactive wastes mixed with K088, K156 through K159, K161, P127, P128, P185, P188 through P192, P194, P196 through P199, P201 through P205, U271, U278 through U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409 through U411 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.
5. Between July 8, 1996, and April 8, 1998, the wastes included in subsections 1, 3, and 4 may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in subdivision b of subsection 8 of section 33.1-24-05-254.
6. The requirements of subsections 1 through 4 do not apply if:
 - a. The wastes meet the applicable treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289;
 - b. Persons have been granted an exemption from a prohibition pursuant to a petition under section 33.1-24-05-255, with respect to those wastes and units covered by the petition;
 - c. The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under section 33.1-24-05-284; or
 - d. Persons have been granted an extension to the effective date of a prohibition pursuant to section 33.1-24-05-254, with respect to these wastes covered by the extension.
7. To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in section 33.1-24-05-280, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable sections 33.1-24-05-280 through 33.1-24-05-289 levels, the waste is prohibited from land disposal, and all requirements of sections 33.1-24-05-250 through 33.1-24-05-299 are applicable, except as otherwise specified.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-280. Applicability of treatment standards.

1. A prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:
 - a. All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste ("Total Waste Standards");
 - b. The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table ("Waste Extract Standards"); or

c. The waste must be treated using the technology specified in the table ("Technology Standard"), which are described in detail in section 33.1-24-05-282, table 1-Technology Codes and Description of Technology-Based Standards.

2. For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test method 1311, the toxicity characteristic leaching procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: method 1311, or method 1310B, the extraction procedure toxicity test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the administrator under the procedures set forth in subsection 2 of section 33.1-24-05-282.

3. When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern.

4. Notwithstanding the prohibitions specified in subsection 1, treatment and disposal facilities may demonstrate (and certify pursuant to subdivision e of subsection 2 of section 33.1-24-05-256) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in this section, provided the following conditions are satisfied:

a. The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of sections 33.1-24-05-144 through 33.1-24-05-159, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

b. The treatment or disposal facility has used the methods referenced in subdivision a to treat the organic constituents; and

c. The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude.

5. For characteristic wastes (D001 through D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes", and are not managed in a wastewater treatment system that is regulated under the Clean Water Act, that is CWA-equivalent, or that is injected into a class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in subsection 10 of section 33.1-24-05-251) must meet universal treatment standards, found in section 33.1-24-05-288, table "Universal Treatment Standards", prior to land disposal as defined in subsection 6 of section 33.1-24-05-251.

6. The treatment standards for F001 through F005 nonwastewater constituents carbon disulfide, cyclohexanone, or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test method 1311, the toxicity characteristic leaching procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency

publication SW-846, as incorporated by reference in section 33.1-24-01-05. If the waste contains any of these three constituents along with any of the other twenty-five constituents found in F001 through F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, or methanol are not required.

7. Between August 26, 1996, and March 4, 1999, the treatment standards for the wastes specified in section 33.1-24-02-17 as hazardous waste numbers K156 through K159 and K161; and in section 33.1-24-02-18 as hazardous waste numbers P127, P128, P185, P188 through P192, P194, P196 through P199, P201 through P205, U271, U277 through U280, U364 through U367, U372, U373, U375 through U379, U381 through U387, U389 through U396, U400 through U404, U407, and U409 through U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Waste", or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST in table 1 in section 33.1-24-05-282, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined by the technology code CMBST in table 1 of section 33.1-24-05-282, for wastewaters.

8. Prohibited D004 through D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage, do not have to be retreated to meet treatment standards in this section prior to land disposal.

9. [Reserved]

10. Effective September 4, 1998, the treatment standards for the wastes specified in section 33.1-24-02-18 as hazardous waste numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST in table 1 of section 33.1-24-05-282, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined by the technology code CMBST in table 1 in section 33.1-24-05-282, for wastewaters.

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>D001⁹</u>	<u>Ignitable characteristic wastes, except for the subdivision a of subsection 1 of section 33.1-24-02-11 high total organic carbon subcategory.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸; or RORGS; or CMBST</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸; or RORGS; or CMBST</u>
	<u>High total organic carbon ignitable characteristic liquids subcategory based on subdivision a of subsection 1 of section 33.1-24-02-11 - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>RORGS; CMBST; or POLYM</u>
<u>D002⁹</u>	<u>Corrosive characteristic wastes.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>
<u>D002, D004, D005, D006, D007, D008, D009, D010, D011</u>	<u>Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Corrosivity (pH)</u>	<u>NA</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Barium</u>	<u>7440-39-3</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Selenium</u>	<u>7782-49-2</u>	<u>NA</u>	<u>HLVIT</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>HLVIT</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>D003⁹</u>	<u>Reactive sulfides subcategory based on subdivision e of subsection 1 of section 33.1-24-02-13.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
	<u>Explosives subcategory based on subdivisions f, g, and h of subsection 1 of section 33.1-24-02-13.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>
	<u>Unexploded ordnance and other explosive devices which have been the subject of an emergency response.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
	<u>Other reactivities subcategory based on subdivision a of subsection 1 of section 33.1-24-02-13.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>
	<u>Water reactive subcategory based on subdivisions b, c, and d of subsection 1 of section 33.1-24-02-13. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>DEACT and meet section 33.1-24-05-288 standards⁸</u>
	<u>Reactive cyanides subcategory based on subdivision e of subsection 1 of section 33.1-24-02-13.</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>Reserved</u>	<u>590</u>
	<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>	
<u>D004⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.0 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
<u>D005⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Barium</u>	<u>7440-39-3</u>	<u>1.2 and meet section 33.1-24-05-288 standards⁸</u>	<u>2.1 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
<u>D006⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.11 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
	<u>Cadmium containing batteries subcategory (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>RTHRM</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
	<u>Radioactively contaminated cadmium containing batteries. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>Macroencapsulation in accordance with section 33.1-24-05-285</u>
<u>D007⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.60 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
<u>D008⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.75 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
	<u>Lead acid batteries subcategory (Note: This standard only applies to lead acid batteries that are identified as Resource Conservation and Recovery Act hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of sections 33.1-24-05-250 through 33.1-24-05-299 or exempted under other regulations. This subcategory consists of nonwastewaters only.)</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>NA</u>	<u>RLEAD</u>
	<u>Radioactive lead solids subcategory (Note: These lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only.)</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>NA</u>	<u>MACRO</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>D009⁹</u>	<u>Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues (high mercury-organic subcategory).</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>IMERC; OR RMERC</u>
	<u>Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC (high mercury-inorganic subcategory).</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>RMERC</u>
	<u>Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury (low mercury subcategory).</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.20 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
	<u>All other nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are not residues from RMERC (low mercury subcategory).</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.25 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
	<u>All D009 wastewaters.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
	<u>Elemental mercury contaminated with radioactive materials. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>AMLGM</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
	<u>Hydraulic oil contaminated with mercury radioactive materials subcategory. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>IMERC</u>
	<u>Radioactively contaminated mercury containing batteries. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>Macroencapsulation in accordance with section 33.1-24-05-285</u>
<u>D010⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.7 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
<u>D011⁹</u>	<u>Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the toxicity characteristic leaching procedure (TCLP) in SW846.</u>	<u>Silver</u>	<u>7440-22-4</u>	<u>0.43 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.14 mg/l TCLP and meet section 33.1-24-05-288 standards⁸</u>
	<u>Radioactively contaminated silver containing batteries. (Note: This subcategory consists of nonwastewaters only.)</u>	<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>Macroencapsulation in accordance with section 33.1-24-05-285</u>
<u>D012⁹</u>	<u>Wastes that are toxicity characteristic for endrin based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Endrin</u>	<u>72-20-8</u>	<u>BIODG; or CMBST</u>	<u>0.13 and meet section 33.1-24-05-288 standards⁸</u>
		<u>Endrin aldehyde</u>	<u>7421-93-4</u>	<u>BIODG; or CMBST</u>	<u>0.13 and meet section 33.1-24-05-288 standards⁸</u>
<u>D013⁹</u>	<u>Wastes that are toxicity characteristic for lindane based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>alpha-BHC</u>	<u>319-84-6</u>	<u>CARBN; or CMBST</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>
		<u>beta-BHC</u>	<u>319-85-7</u>	<u>CARBN; or CMBST</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>
		<u>delta-BHC</u>	<u>319-86-8</u>	<u>CARBN; or CMBST</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>gamma-BHC (Lindane)</u>	<u>58-89-9</u>	<u>CARBN; or CMBST</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>
<u>D014⁹</u>	<u>Wastes that are toxicity characteristic for methoxychlor based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Methoxychlor</u>	<u>72-43-5</u>	<u>WETOX or CMBST</u>	<u>0.18 and meet section 33.1-24-05-288 standards⁸</u>
<u>D015⁹</u>	<u>Wastes that are toxicity characteristic for toxaphene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Toxaphene</u>	<u>8001-35-2</u>	<u>BIODG or CMBST</u>	<u>2.6 and meet section 33.1-24-05-288 standards⁸</u>
<u>D016⁹</u>	<u>Wastes that are toxicity characteristic for 2,4-D(2,4-Dichlorophenoxyacetic acid) based on the toxicity characteristic leaching procedure in SW 846 Method 1311.</u>	<u>2,4-D(2,4-Dichlorophenoxyacetic acid)</u>	<u>94-75-7</u>	<u>CHOXD; BIODG; or CMBST</u>	<u>10 and meet section 33.1-24-05-288 standards⁸</u>
<u>D017⁹</u>	<u>Wastes that are toxicity characteristic for 2,4,5-TP(Silvex) based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>2,4,5-TP(Silvex)</u>	<u>93-72-1</u>	<u>CHOXD or CMBST</u>	<u>7.9 and meet section 33.1-24-05-288 standards⁸</u>
<u>D018⁹</u>	<u>Wastes that are toxicity characteristic for benzene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14 and meet section 33.1-24-05-288 standards⁸</u>	<u>10 and meet section 33.1-24-05-288 standards⁸</u>
<u>D019⁹</u>	<u>Wastes that are toxicity characteristic for carbon tetrachloride based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D020⁹</u>	<u>Wastes that are toxicity characteristic for chlordane based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Chlordane (alpha and gamma isomers)</u>	<u>57-74-9</u>	<u>0.0033 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.26 and meet section 33.1-24-05-288 standards⁸</u>
<u>D021⁹</u>	<u>Wastes that are toxicity characteristic for chlorobenzene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>D022⁹</u>	<u>Wastes that are toxicity characteristic for chloroform based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D023⁹</u>	<u>Wastes that are toxicity characteristic for o-cresol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.6 and meet section 33.1-24-05-288 standards⁸</u>
<u>D024⁹</u>	<u>Wastes that are toxicity characteristic for m-cresol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.6 and meet section 33.1-24-05-288 standards⁸</u>
<u>D025⁹</u>	<u>Wastes that are toxicity characteristic for p-cresol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.6 and meet section 33.1-24-05-288 standards⁸</u>
<u>D026⁹</u>	<u>Wastes that are toxicity characteristic for cresols (total) based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)</u>	<u>1319-77-3</u>	<u>0.88 and meet section 33.1-24-05-288 standards⁸</u>	<u>11.2 and meet section 33.1-24-05-288 standards⁸</u>
<u>D027⁹</u>	<u>Wastes that are toxicity characteristic for p-dichloro-benzene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>p-Dichlorobenzene (1,4-Dichlorobenzene)</u>	<u>106-46-7</u>	<u>0.090 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D028⁹</u>	<u>Wastes that are toxicity characteristic for 1,2-dichloroethane based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D029⁹</u>	<u>Wastes that are toxicity characteristic for 1,1-dichloroethylene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D030⁹</u>	<u>Wastes that are toxicity characteristic for 2,4-dinitrotoluene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>0.32 and meet section 33.1-24-05-288 standards⁸</u>	<u>140 and meet section 33.1-24-05-288 standards⁸</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
D031 ⁹	<u>Wastes that are toxicity characteristic for heptachlor based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Heptachlor	<u>76-44-8</u>	<u>0.0012 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>
		Heptachlor epoxide	<u>1024-57-3</u>	<u>0.016 and meet section 33.1-24-05-288 standards⁸</u>	<u>0.066 and meet section 33.1-24-05-288 standards⁸</u>
D032 ⁹	<u>Wastes that are toxicity characteristic for hexachloro- benzene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Hexachlorobenzene	<u>118-74-1</u>	<u>0.055 and meet section 33.1-24-05-288 standards⁸</u>	<u>10 and meet section 33.1-24-05-288 standards⁸</u>
D033 ⁹	<u>Wastes that are toxicity characteristic for hexachlorobutadiene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Hexachlorobutadiene	<u>87-68-3</u>	<u>0.055 and meet section 33.1-24-05-288 standards⁸</u>	<u>5.6 and meet section 33.1-24-05-288 standards⁸</u>
D034 ⁹	<u>Wastes that are toxicity characteristic for hexachloroethane based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Hexachloroethane	<u>67-72-1</u>	<u>0.055 and meet section 33.1-24-05-288 standards⁸</u>	<u>30 and meet section 33.1-24-05-288 standards⁸</u>
D035 ⁹	<u>Wastes that are toxicity characteristic for methyl ethyl ketone based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Methyl ethyl ketone	<u>78-93-3</u>	<u>0.28 and meet section 33.1-24-05-288 standards⁸</u>	<u>36 and meet section 33.1-24-05-288 standards⁸</u>
D036 ⁹	<u>Wastes that are toxicity characteristic for nitrobenzene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Nitrobenzene	<u>98-95-3</u>	<u>0.068 and meet section 33.1-24-05-288 standards⁸</u>	<u>14 and meet section 33.1-24-05-288 standards⁸</u>
D037 ⁹	<u>Wastes that are toxicity characteristic for pentachlorophenol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Pentachlorophenol	<u>87-86-5</u>	<u>0.089 and meet section 33.1-24-05-288 standards⁸</u>	<u>7.4 and meet section 33.1-24-05-288 standards⁸</u>
D038 ⁹	<u>Wastes that are toxicity characteristic for pyridine based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Pyridine	<u>110-86-1</u>	<u>0.014 and meet section 33.1-24-05-288 standards⁸</u>	<u>16 and meet section 33.1-24-05-288 standards⁸</u>
D039 ⁹	<u>Wastes that are toxicity characteristic for tetrachloroethylene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	Tetrachloroethylene	<u>127-18-4</u>	<u>0.056 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/ TCLP"; or Technology Code</u>
<u>D040⁹</u>	<u>Wastes that are toxicity characteristic for trichloroethylene based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>D041⁹</u>	<u>Wastes that are toxicity characteristic for 2,4,5-trichlorophenol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18 and meet section 33.1-24-05-288 standards⁸</u>	<u>7.4 and meet section 33.1-24-05-288 standards⁸</u>
<u>D042⁹</u>	<u>Wastes that are toxicity characteristic for 2,4,6-trichlorophenol based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035 and meet section 33.1-24-05-288 standards⁸</u>	<u>7.4 and meet section 33.1-24-05-288 standards⁸</u>
<u>D043⁹</u>	<u>Wastes that are toxicity characteristic for vinyl chloride based on the toxicity characteristic leaching procedure in SW846 Method 1311.</u>	<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27 and meet section 33.1-24-05-288 standards⁸</u>	<u>6.0 and meet section 33.1-24-05-288 standards⁸</u>
<u>F001, F002, F003, F004, & F005</u>	<u>F001, F002, F003, F004 and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethylene, trichloromonofluoromethane, and/or xylenes [except as specifically noted in other subcategories]. See further details of these listings in section 33.1-24-02-16.</u>	<u>Acetone</u>	<u>67-64-1</u>	<u>0.28</u>	<u>160</u>
		<u>Benzene</u>	<u>71-42-2</u>	<u>0.14</u>	<u>10</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>5.6</u>	<u>2.6</u>
		<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>NA</u>
		<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
		<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11</u>	<u>5.6</u>
		<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77</u>	<u>5.6</u>
		<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
		<u>Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)</u>	<u>1319-77-3</u>		
		<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>NA</u>
		<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>0.34</u>	<u>33</u>
		<u>Ethyl benzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Ethyl ether</u>	<u>60-29-7</u>	<u>0.12</u>	<u>160</u>
		<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>5.6</u>	<u>170</u>
		<u>Methanol</u>	<u>67-56-1</u>	<u>5.6</u>	<u>NA</u>
		<u>Methylene chloride</u>	<u>75-9-2</u>	<u>0.089</u>	<u>30</u>
		<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
		<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>0.14</u>	<u>33</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>Pyridine</u>	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
		<u>1,1,2-Trichloro-1,2,2-trifluoroethane</u>	<u>76-13-1</u>	<u>0.057</u>	<u>30</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		Trichloroethylene	79-01-6	0.054	6.0
		Trichloromonofluoromethane	75-69-4	0.020	30
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
	F003 and/or F005 solvent wastes that contain any combination of one or more of the following three solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone, and/or methanol (formerly subsection 3 of section 33.1-24-05-281).	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
		Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
		Methanol	67-56-1	5.6	0.75 mg/l TCLP
	F005 solvent waste containing 2-nitropropane as the only listed F001-F005 solvent.	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
	F005 solvent waste containing 2-ethoxyethanol as the only listed F001-F005 solvent.	2-Ethoxyethanol	110-80-5	BIODG; or CMBST	CMBST
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	Cadmium	7440-43-9	.069	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total) ⁷	57-12-5	1.2	590
		Cyanides (Amenable) ⁷	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11.0 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F007	Spent cyanide plating bath solutions from electroplating operations.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
F008	<u>Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-31-9</u>	<u>NA</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
F009	<u>Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
F010	<u>Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>NA</u>
F011	<u>Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
F012	<u>Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>NA</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
F019	<u>Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.</u>	<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>F020, F021, F022, F023, F026</u>	<u>Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (for example, F021); (3) tetra-, penta-, or hexachloro-benzenes under alkaline conditions (for example, F022; and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (for example, F026).</u>	<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDFs (All Pentachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
		<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
		<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>F024</u>	<u>Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in section 33.1-24-02-16 or 33.1-24-02-17.)</u>	<u>All F024 Wastes</u>	<u>NA</u>	<u>CMBST¹¹</u>	<u>CMBST¹¹</u>
		<u>2-Chloro-1,3-butadiene</u>	<u>126-99-8</u>	<u>0.057</u>	<u>0.28</u>
		<u>3-Chloropropylene</u>	<u>107-05-1</u>	<u>0.036</u>	<u>30</u>
		<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>0.059</u>	<u>6.0</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>0.85</u>	<u>18</u>
		<u>cis-1,3-Dichloropropylene</u>	<u>10061-01-5</u>	<u>0.036</u>	<u>18</u>
		<u>trans-1,3-Dichloropropylene</u>	<u>10061-02-6</u>	<u>0.036</u>	<u>18</u>
		<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
<u>F025</u>	<u>Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.</u> <u>F025 - Light ends subcategory.</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025</u>	<u>6.0</u>
		<u>Methylene chloride</u>	<u>75-9-2</u>	<u>0.089</u>	<u>30</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
		<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27</u>	<u>6.0</u>
	<u>Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. F025 - Spent filters/aids and desiccants subcategory.</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Methylene chloride</u>	<u>75-9-2</u>	<u>0.089</u>	<u>30</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
		<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27</u>	<u>6.0</u>
<u>F027</u>	<u>Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols (this listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component).</u>	<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
F028	<u>Residues resulting from the incineration or thermal treatment of soil contaminated with hazardous wastes numbers F020, F021, F023, F026, and F027.</u>	<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDFs (All Pentachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
		<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
		<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>
		<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDFs (All Pentachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>		
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.30</u>	<u>7.4</u>		

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>F032</u>	<u>Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with section 33.1-24-02-19 or potentially cross-contaminated wastes that are otherwise regulated as hazardous wastes (for example, F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.</u>	<u>Acenaphthene</u>	<u>83-32-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>2-4-Dimethyl phenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>14</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Hexachlorodibenzo-p-dioxins</u>	<u>NA</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Hexachlorodibenzofurans</u>	<u>NA</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Indeno (1,2,3-c,d) pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Pentachlorodibenzo-p-dioxins</u>	<u>NA</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Pentachlorodibenzofurans</u>	<u>NA</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Tetrachlorodibenzo-p-dioxins</u>	<u>NA</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Tetrachlorodibenzofurans</u>	<u>NA</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>
		<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Chromium (total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
<u>F034</u>	<u>Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.</u>	<u>Acenaphthene</u>	<u>83-32-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Indeno (1,2,3-c,d) pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Chromium (total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
<u>F035</u>	<u>Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Chromium (total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
F037	Petroleum refinery primary oil/water/solids separation sludge-any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in subdivision b of subsection 2 of section 33.1-24-02-16 (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	Acenaphthene	<u>83-32-9</u>	<u>0.059</u>	<u>NA</u>
		Anthracene	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		Benzene	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		Benz(a)anthracene	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		Benzo(a)pyrene	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		bis(2-Ethylhexyl) phthalate	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		Chrysene	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		Di-n-butyl phthalate	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
		Ethylbenzene	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		Fluorene	<u>86-73-7</u>	<u>0.059</u>	<u>NA</u>
		Naphthalene	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		Phenanthrene	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		Phenol	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		Pyrene	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		Toluene	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		Chromium (Total)	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		Cyanides (Total) ⁷	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		Lead	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		Nickel	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>
<u>F038</u>	<u>Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in subdivision b of subsection 2 of section 33.1-24-02-16 (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing.</u>	Benzene	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		Benzo(a)pyrene	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		bis(2-Ethylhexyl) phthalate	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>NA</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>
<u>F039</u>	<u>Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under sections 33.1-24-05-280 through 33.1-24-05-289 (leachate resulting from the disposal of one or more of the following hazardous wastes and no other hazardous wastes retains its hazardous waste number(s): F020, F021, F022, F026, F027, and/or F028).</u>	<u>Acenaphthylene</u>	<u>208-96-8</u>	<u>0.059</u>	<u>3.4</u>
		<u>Acenaphthene</u>	<u>83-32-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Acetone</u>	<u>67-64-1</u>	<u>0.28</u>	<u>160</u>
		<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>NA</u>
		<u>Acetophenone</u>	<u>96-86-2</u>	<u>0.010</u>	<u>9.7</u>
		<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>	<u>0.059</u>	<u>140</u>
		<u>Acrolein</u>	<u>107-02-8</u>	<u>0.29</u>	<u>NA</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
		<u>Aldrin</u>	<u>309-00-2</u>	<u>0.021</u>	<u>0.066</u>
		<u>4-Aminobiphenyl</u>	<u>92-67-1</u>	<u>0.13</u>	<u>NA</u>
		<u>o-Anisidine (2-methoxyaniline)</u>	<u>90-04-0</u>	<u>0.010</u>	<u>0.66</u>
		<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Aramite</u>	<u>140-57-8</u>	<u>0.36</u>	<u>NA</u>
		<u>alpha-BHC</u>	<u>319-84-6</u>	<u>0.00014</u>	<u>0.066</u>
		<u>beta-BHC</u>	<u>319-85-7</u>	<u>0.00014</u>	<u>0.066</u>
		<u>delta-BHC</u>	<u>319-86-8</u>	<u>0.023</u>	<u>0.0.066</u>
		<u>gamma-BHC</u>	<u>58-89-9</u>	<u>0.0017</u>	<u>0.066</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>	<u>0.0055</u>	<u>1.8</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Bromodichloromethane</u>	<u>75-27-4</u>	<u>0.35</u>	<u>15</u>
		<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
		<u>4-Bromophenyl phenyl ether</u>	<u>101-55-3</u>	<u>0.055</u>	<u>15</u>
		<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>5.6</u>	<u>2.6</u>
		<u>Butyl benzyl phthalate</u>	<u>85-68-7</u>	<u>0.017</u>	<u>28</u>
		<u>2-sec-Butyl-4,6-dinitrophenol (Dinoseb)</u>	<u>88-85-7</u>	<u>0.066</u>	<u>2.5</u>
		<u>Carbondisulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>NA</u>
		<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chlordane (alpha and gamma isomers)</u>	<u>57-74-9</u>	<u>0.0033</u>	<u>0.26</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>p-Chloroaniline</u>	<u>106-47-8</u>	<u>0.46</u>	<u>16</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chlorobenzilate</u>	<u>510-15-6</u>	<u>0.10</u>	<u>NA</u>
		<u>2-Chloro-1,3-butadiene</u>	<u>126-99-8</u>	<u>0.057</u>	<u>NA</u>
		<u>Chlorodibromomethane</u>	<u>124-48-1</u>	<u>0.057</u>	<u>15</u>
		<u>Chloroethane</u>	<u>75-00-3</u>	<u>0.27</u>	<u>6.0</u>
		<u>bis(2-Chloroethoxy)methane</u>	<u>111-91-1</u>	<u>0.036</u>	<u>7.2</u>
		<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>0.033</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>bis(2-Chloroisopropyl)ether</u>	<u>39638-32-9</u>	<u>0.055</u>	<u>7.2</u>
		<u>p-Chloro-m-cresol</u>	<u>59-50-7</u>	<u>0.018</u>	<u>14</u>
		<u>Chloromethane (Methyl chlorida)</u>	<u>74-87-3</u>	<u>0.19</u>	<u>30</u>
		<u>2-Chloronaphthalene</u>	<u>91-58-7</u>	<u>0.055</u>	<u>5.6</u>
		<u>2-Chlorophenol</u>	<u>95-57-8</u>	<u>0.044</u>	<u>5.7</u>
		<u>3-Chloropropylene</u>	<u>107-05-1</u>	<u>0.036</u>	<u>30</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11</u>	<u>5.6</u>
		<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77</u>	<u>5.6</u>
		<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
		<u>p-Cresidine</u>	<u>120-71-8</u>	<u>0.010</u>	<u>0.66</u>
		<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>NA</u>
		<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>0.11</u>	<u>15</u>
		<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
		<u>Dibromomethane</u>	<u>74-95-3</u>	<u>0.11</u>	<u>15</u>
		<u>2,4-D (2,4-Dichlorophenoxyacetic acid)</u>	<u>94-75-7</u>	<u>0.72</u>	<u>10</u>
		<u>o,p'-DDD</u>	<u>53-19-0</u>	<u>0.023</u>	<u>0.087</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>p,p'-DDD</u>	<u>72-54-8</u>	<u>0.023</u>	<u>0.087</u>
		<u>o,p'-DDE</u>	<u>3424-82-6</u>	<u>0.031</u>	<u>0.087</u>
		<u>p,p'-DDE</u>	<u>72-55-9</u>	<u>0.031</u>	<u>0.087</u>
		<u>o,p'-DDT</u>	<u>789-02-6</u>	<u>0.0039</u>	<u>0.087</u>
		<u>p,p'-DDT</u>	<u>50-29-3</u>	<u>0.0039</u>	<u>0.087</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>Dibenz(a,e)pyrene</u>	<u>192-65-4</u>	<u>0.061</u>	<u>NA</u>
		<u>m-Dichlorobenzene</u>	<u>541-73-1</u>	<u>0.036</u>	<u>6.0</u>
		<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>0.23</u>	<u>7.2</u>
		<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>0.059</u>	<u>6.0</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025</u>	<u>6.0</u>
		<u>trans-1,2-Dichloroethylene</u>	<u>156-60-5</u>	<u>0.054</u>	<u>30</u>
		<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>0.044</u>	<u>14</u>
		<u>2,6-Dichlorophenol</u>	<u>87-65-0</u>	<u>0.044</u>	<u>14</u>
		<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>0.85</u>	<u>18</u>
		<u>cis-1,3-Dichloropropylene</u>	<u>10061-01-5</u>	<u>0.036</u>	<u>18</u>
		<u>trans-1,3-Dichloropropylene</u>	<u>10061-02-6</u>	<u>0.036</u>	<u>18</u>
		<u>Dieldrin</u>	<u>60-57-1</u>	<u>0.017</u>	<u>0.13</u>
		<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>0.20</u>	<u>28</u>
		<u>2,4-Dimethylaniline (2,4-xylydine)</u>	<u>95-68-1</u>	<u>0.010</u>	<u>0.66</u>
		<u>2,4-Dimethyl phenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>14</u>
		<u>Dimethyl phthalate</u>	<u>131-11-3</u>	<u>0.047</u>	<u>28</u>
		<u>Di-n-butyl phthalate</u>	<u>87-74-2</u>	<u>0.057</u>	<u>28</u>
		<u>1,4-Dinitrobenzene</u>	<u>100-25-4</u>	<u>0.32</u>	<u>2.3</u>
		<u>4,6-Dinitro-o-cresol</u>	<u>534-52-1</u>	<u>0.28</u>	<u>160</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>0.12</u>	<u>160</u>
		<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>0.32</u>	<u>140</u>
		<u>2,6-Dinitrotoluene</u>	<u>606-20-2</u>	<u>0.55</u>	<u>28</u>
		<u>Di-n-octyl phthalate</u>	<u>117-84-0</u>	<u>0.017</u>	<u>28</u>
		<u>Di-n-propylnitrosamine</u>	<u>621-64-7</u>	<u>0.40</u>	<u>14</u>
		<u>1,4-Dioxane</u>	<u>123-91-1</u>	<u>12.0</u>	<u>170</u>
		<u>Diphenylamine (difficult to distinguish from diphenylnitrosamine)</u>	<u>122-39-4</u>	<u>0.92</u>	<u>13</u>
		<u>Diphenylnitrosamine (difficult to distinguish from diphenylamine)</u>	<u>86-30-6</u>	<u>0.92</u>	<u>13</u>
		<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>0.087</u>	<u>NA</u>
		<u>Disulfoton</u>	<u>298-04-4</u>	<u>0.017</u>	<u>6.2</u>
		<u>Endosulfan I</u>	<u>939-98-8</u>	<u>0.023</u>	<u>0.066</u>
		<u>Endosulfan II</u>	<u>33213-6-5</u>	<u>0.029</u>	<u>0.13</u>
		<u>Endosulfan sulfate</u>	<u>131-07-8</u>	<u>0.029</u>	<u>0.13</u>
		<u>Endrin</u>	<u>72-20-8</u>	<u>0.0028</u>	<u>0.13</u>
		<u>Endrin aldehyde</u>	<u>7421-93-4</u>	<u>0.025</u>	<u>0.13</u>
		<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>0.34</u>	<u>33</u>
		<u>Ethyl cyanide (Propanenitrile)</u>	<u>107-12-0</u>	<u>0.24</u>	<u>360</u>
		<u>Ethyl benzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Ethyl ether</u>	<u>60-29-7</u>	<u>0.12</u>	<u>160</u>
		<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		<u>Ethyl methacrylate</u>	<u>97-63-2</u>	<u>0.14</u>	<u>160</u>
		<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>0.12</u>	<u>NA</u>
		<u>Famphur</u>	<u>52-85-7</u>	<u>0.017</u>	<u>15</u>
		<u>Fluoranthene</u>	<u>206-44-0</u>	<u>0.068</u>	<u>3.4</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Heptachlor</u>	<u>76-44-8</u>	<u>0.0012</u>	<u>0.066</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>0.016</u>	<u>0.066</u>
		<u>1,2,3,4,6,7,8- Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)</u>	<u>67562-39-4</u>	<u>0.000035</u>	<u>0.0025</u>
		<u>1,2,3,4,7,8,9- Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)</u>	<u>55673-89-7</u>	<u>0.000035</u>	<u>0.0025</u>
		<u>1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)</u>	<u>35822-46-9</u>	<u>0.000035</u>	<u>0.0025</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
		<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
		<u>HxCDDs (All Hexa- chlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Hexachloropropylene</u>	<u>1888-71-7</u>	<u>0.035</u>	<u>30</u>
		<u>Indeno (1,2,3-c,d) pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Iodomethane</u>	<u>74-88-4</u>	<u>0.19</u>	<u>65</u>
		<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>5.6</u>	<u>170</u>
		<u>Isodrin</u>	<u>465-73-6</u>	<u>0.021</u>	<u>0.066</u>
		<u>Isosafrole</u>	<u>120-58-1</u>	<u>0.081</u>	<u>2.6</u>
		<u>Kepone</u>	<u>143-50-8</u>	<u>0.0011</u>	<u>0.13</u>
		<u>Methacrylonitrile</u>	<u>126-98-7</u>	<u>0.24</u>	<u>84</u>
		<u>Methanol</u>	<u>67-56-1</u>	<u>5.6</u>	<u>NA</u>
		<u>Methapyrilene</u>	<u>91-80-5</u>	<u>0.081</u>	<u>1.5</u>
		<u>Methoxychlor</u>	<u>72-43-5</u>	<u>0.25</u>	<u>0.18</u>
		<u>3-Methylcholanthrene</u>	<u>56-49-5</u>	<u>0.0055</u>	<u>15</u>
		<u>4,4-Methylene bis(2- chloroaniline)</u>	<u>101-14-4</u>	<u>0.50</u>	<u>30</u>
		<u>Methylene chloride</u>	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
		<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>0.14</u>	<u>33</u>
		<u>Methyl methacrylate</u>	<u>80-62-6</u>	<u>0.14</u>	<u>160</u>
		<u>Methyl methansulfonate</u>	<u>66-27-3</u>	<u>0.018</u>	<u>NA</u>
		<u>Methyl parathion</u>	<u>298-00-0</u>	<u>0.014</u>	<u>4.6</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>2-Naphthylamine</u>	<u>91-59-8</u>	<u>0.52</u>	<u>NA</u>
		<u>p-Nitroaniline</u>	<u>100-01-6</u>	<u>0.028</u>	<u>28</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>5-Nitro-o-toluidine</u>	<u>99-55-8</u>	<u>0.32</u>	<u>28</u>
		<u>p-Nitrophenol</u>	<u>100-02-7</u>	<u>0.12</u>	<u>29</u>
		<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>0.40</u>	<u>28</u>
		<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>	<u>0.40</u>	<u>NA</u>
		<u>N-Nitroso-di-n-butylamine</u>	<u>924-16-3</u>	<u>0.40</u>	<u>17</u>
		<u>N-Nitrosomethylethylamine</u>	<u>10595-95-6</u>	<u>0.40</u>	<u>2.3</u>
		<u>N-Nitrosomorpholine</u>	<u>59-89-2</u>	<u>0.40</u>	<u>2.3</u>
		<u>N-Nitrosopiperidine</u>	<u>100-75-4</u>	<u>0.013</u>	<u>35</u>
		<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>0.013</u>	<u>35</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzofuran (OCDF)</u>	<u>39001-02-0</u>	<u>0.000063</u>	<u>0.005</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin (OCDD)</u>	<u>3268-87-9</u>	<u>0.000063</u>	<u>0.0025</u>
		<u>Parathion</u>	<u>56-38-2</u>	<u>0.014</u>	<u>4.6</u>
		<u>Total PCBs (sum of all PCB isomers, or all Aroclors)</u>	<u>1336-36-3</u>	<u>0.10</u>	<u>10</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>PeCDDs (All Penta- chlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDFs (All Pentachlorodi- benzofurans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>
		<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>0.055</u>	<u>4.8</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>Phenacetin</u>	<u>62-44-2</u>	<u>0.081</u>	<u>16</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>1,3-Phenylenediamine</u>	<u>108-45-2</u>	<u>0.010</u>	<u>0.66</u>
		<u>Phorate</u>	<u>298-02-2</u>	<u>0.021</u>	<u>4.6</u>
		<u>Phthalic anhydride</u>	<u>85-44-9</u>	<u>0.055</u>	<u>NA</u>
		<u>Pronamide</u>	<u>23950-58-5</u>	<u>0.093</u>	<u>1.5</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Pyridine</u>	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
		<u>Safrole</u>	<u>94-59-7</u>	<u>0.081</u>	<u>22</u>
		<u>Silvex (2,4,5-TP)</u>	<u>93-72-1</u>	<u>0.72</u>	<u>7.9</u>
		<u>2,4,5-T</u>	<u>93-76-5</u>	<u>0.72</u>	<u>7.9</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>TCDDs (All Tetra- chlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>TCDFs (All Tetra- chlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>1,1,1,2-Tetrachloroethane</u>	<u>630-20-6</u>	<u>0.057</u>	<u>6.0</u>
		<u>1,1,1,2,2-Tetrachloroethane</u>	<u>79-34-6</u>	<u>0.057</u>	<u>6.0</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Toxaphene</u>	<u>8001-35-2</u>	<u>0.0095</u>	<u>2.6</u>
		<u>Bromoform (Tribromomethane)</u>	<u>75-25-2</u>	<u>0.63</u>	<u>15</u>
		<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
		<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>0.020</u>	<u>30</u>
		<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
		<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
		<u>1,2,3-Trichloropropane</u>	<u>96-18-4</u>	<u>0.85</u>	<u>30</u>
		<u>1,1,2-Trichloro-1,2,2- trifluoroethane</u>	<u>76-13-1</u>	<u>0.057</u>	<u>30</u>
		<u>tris(2,3-Dibromopropyl) phosphate</u>	<u>126-72-7</u>	<u>0.11</u>	<u>NA</u>
		<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27</u>	<u>6.0</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Barium</u>	<u>7440-39-3</u>	<u>1.2</u>	<u>21 mg/l TCLP</u>
		<u>Beryllium</u>	<u>7440-41-7</u>	<u>0.82</u>	<u>NA</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)</u>	<u>57-12-5</u>	<u>0.86</u>	<u>NA</u>
		<u>Fluoride</u>	<u>16964-48-8</u>	<u>35</u>	<u>NA</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>0.025 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>0.43</u>	<u>0.14 mg/l TCLP</u>
		<u>Sulfide</u>	<u>8496-25-8</u>	<u>14</u>	<u>NA</u>
		<u>Thallium</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>NA</u>
		<u>Vanadium</u>	<u>7440-62-2</u>	<u>4.3</u>	<u>NA</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K001	<u>Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.</u>	<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K002	<u>Wastewater treatment sludge from the production of chrome yellow and orange pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K003	<u>Wastewater treatment sludge from the production of molybdate orange pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K004	<u>Wastewater treatment sludge from the production of zinc yellow pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K005	<u>Wastewater treatment sludge from the production of chrome green pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
K006	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous).</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated).</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
<u>K007</u>	<u>Wastewater treatment sludge from the production of iron blue pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
<u>K008</u>	<u>Oven residue from the production of chrome oxide green pigments.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
<u>K009</u>	<u>Distillation bottoms from the production of acetaldehyde from ethylene.</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
<u>K010</u>	<u>Distillation side cuts from the production of acetaldehyde from ethylene.</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
<u>K011</u>	<u>Bottom stream from the wastewater stripper in the production of acrylonitrile.</u>	<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>38</u>
		<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
		<u>Acrylamide</u>	<u>79-06-1</u>	<u>19</u>	<u>23</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Cyanide (Total)</u>	<u>47-12-5</u>	<u>1.2</u>	<u>590</u>
<u>K013</u>	<u>Bottom stream from the acetonitrile column in the production of acrylonitrile.</u>	<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>38</u>
		<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
		<u>Acrylamide</u>	<u>79-06-1</u>	<u>19</u>	<u>23</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Cyanide (Total)</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
<u>K014</u>	<u>Bottoms from the acetonitrile purification column in the production of acrylonitrile.</u>	<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>38</u>
		<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
		<u>Acrylamide</u>	<u>79-06-1</u>	<u>19</u>	<u>23</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Cyanide (Total)</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K015	<u>Still bottoms from the distillation of benzyl chloride.</u>	<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzal chloride</u>	<u>98-87-3</u>	<u>0.055</u>	<u>6.0</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoroanthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
K016	<u>Heavy ends or distillation residues from the production of carbon tetrachloride.</u>	<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
		<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
K017	<u>Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.</u>	<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>0.033</u>	<u>6.0</u>
		<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>0.85</u>	<u>18</u>
		<u>1,2,3-Trichloropropane</u>	<u>96-18-4</u>	<u>0.85</u>	<u>30</u>
K018	<u>Heavy ends from the fractionation column in ethyl chloride production.</u>	<u>Chloroethane</u>	<u>75-00-3</u>	<u>0.27</u>	<u>6.0</u>
		<u>Chloromethane</u>	<u>74-87-3</u>	<u>0.19</u>	<u>NA</u>
		<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>0.059</u>	<u>6.0</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K019	<u>Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.</u>	<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>NA</u>	<u>6.0</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>0.033</u>	<u>6.0</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>NA</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>NA</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>NA</u>
		K020	<u>Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.</u>	<u>Tetrachloroethylene</u>	<u>127-18-4</u>
<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>			<u>0.055</u>	<u>19</u>
<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>			<u>0.054</u>	<u>6.0</u>
<u>1,2-Dichloroethane</u>	<u>107-06-2</u>			<u>0.21</u>	<u>6.0</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-6</u>			<u>0.057</u>	<u>6.0</u>
K021	<u>Aqueous spent antimony catalyst waste from fluoromethanes production.</u>	<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
K022	<u>Distillation bottom tars from the production of phenol/acetone from cumene.</u>	<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Acetophenone</u>	<u>96-86-2</u>	<u>0.010</u>	<u>9.7</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
		Phenol	108-95-2	0.039	6.2
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Nickel	7440-02-0	3.98	11.0 mg/l TCLP
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	NA	NA	LLEXT fb SSTRP fb CARBN; or CMBST	CMBST
K026	Stripping still tails from the production of methyl ethyl pyridines.	NA	NA	CMBST	CMBST
K027	Centrifuge and distillation residues from toluene diisocyanate production.	NA	NA	CARBAN; or CMBST	CMBST
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	1,1-Dichloroethane	75-34-3	0.059	6.0
		trans-1,2-Dichloroethylene	156-60-5	0.054	30
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Pentachloroethane	76-01-7	NA	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>NA</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
<u>K029</u>	<u>Waste from the product steam stripper in the production of 1,1,1-trichloroethane.</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
		<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025</u>	<u>6.0</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27</u>	<u>6.0</u>
<u>K030</u>	<u>Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene.</u>	<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>NA</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>NA</u>
		<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Hexachloropropylene</u>	<u>1888-71-7</u>	<u>NA</u>	<u>30</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>NA</u>	<u>10</u>
		<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>NA</u>	<u>6.0</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>
<u>K031</u>	<u>Byproduct salts generated in the production of MSMA and cacodylic acid.</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
<u>K032</u>	<u>Wastewater treatment sludge from the production of chlordane.</u>	<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
		<u>Chlordane (alpha and gamma isomers)</u>	<u>57-74-9</u>	<u>0.0033</u>	<u>0.26</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Heptachlor</u>	<u>76-44-8</u>	<u>0.0012</u>	<u>0.066</u>
		<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>0.016</u>	<u>0.066</u>
<u>K033</u>	<u>Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.</u>	<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
<u>K034</u>	<u>Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.</u>	<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
<u>K035</u>	<u>Wastewater treatment sludges generated in the production of creosote.</u>	<u>Acenaphthene</u>	<u>83-32-9</u>	<u>NA</u>	<u>3.4</u>
		<u>Anthracene</u>	<u>120-12-7</u>	<u>NA</u>	<u>3.4</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11</u>	<u>5.6</u>
		<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77</u>	<u>5.6</u>
		<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>NA</u>	<u>8.2</u>
		<u>Fluoranthene</u>	<u>206-44-0</u>	<u>0.068</u>	<u>3.4</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>NA</u>	<u>3.4</u>
		<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>NA</u>	<u>3.4</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
<u>K036</u>	<u>Still bottoms from toluene reclamation distillation in the production of disulfoton.</u>	<u>Disulfoton</u>	<u>298-04-4</u>	<u>0.017</u>	<u>6.2</u>
<u>K037</u>	<u>Wastewater treatment sludges from the production of disulfoton.</u>	<u>Disulfoton</u>	<u>298-04-4</u>	<u>0.017</u>	<u>6.2</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
<u>K038</u>	<u>Wastewater from the washing and stripping of phorate production.</u>	<u>Phorate</u>	<u>298-02-2</u>	<u>0.021</u>	<u>4.6</u>
<u>K039</u>	<u>Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate.</u>	<u>NA</u>	<u>NA</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
<u>K040</u>	<u>Wastewater treatment sludge from the production of phorate.</u>	<u>Phorate</u>	<u>298-02-2</u>	<u>0.021</u>	<u>4.6</u>
<u>K041</u>	<u>Wastewater treatment sludge from the production of toxaphene.</u>	<u>Toxaphene</u>	<u>8001-35-2</u>	<u>0.0095</u>	<u>2.6</u>
<u>K042</u>	<u>Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.</u>	<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>
<u>K043</u>	<u>2,6-Dichlorophenol waste from the production of 2,4-D.</u>	<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>0.044</u>	<u>14</u>
		<u>2,6-Dichlorophenol</u>	<u>187-65-0</u>	<u>0.044</u>	<u>14</u>
		<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
		<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
		<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>
		<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>HxCDFs (All hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDDs (All Penta- chlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>PeCDFs (All Penta- chlorodibenzofurans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>TCDDs (All tetra- chlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
		<u>TCDFs (All Tetra- chlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>K044</u>	<u>Wastewater treatment sludges from the manufacturing and processing of explosives.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
<u>K045</u>	<u>Spent carbon from the treatment of wastewater containing explosives.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
<u>K046</u>	<u>Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
<u>K047</u>	<u>Pink/red water from TNT operations.</u>	<u>NA</u>	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
<u>K048</u>	<u>Dissolved air flotation (DAF) float from the petroleum refining industry.</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>NA</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Toluene</u>	<u>108-88-33</u>	<u>0.080</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>		
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>		
K049	<u>Slop oil emulsion solids from the petroleum refining industry.</u>	<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>		
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>		
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>		
		<u>bis(2)-Ethylhexyl phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>		
		<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>NA</u>		
		<u>Chrysene</u>	<u>2218-01-9</u>	<u>0.059</u>	<u>3.4</u>		
		<u>2,4-Dimethylphenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>NA</u>		
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>		
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>		
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>		
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>		
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>		
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>		
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>		
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>		
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>		
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>		
		<u>Nickel</u>	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>		
		K050	<u>Heat exchanger bundle cleaning sludge from the petroleum refining industry.</u>	<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
				<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>			<u>1.2</u>	<u>590</u>		
<u>Chromium (Total)</u>	<u>7440-47-3</u>			<u>2.77</u>	<u>0.60 mg/l TCLP</u>		
<u>Lead</u>	<u>7439-92-1</u>			<u>0.69</u>	<u>NA</u>		
<u>Nickel</u>	<u>7440-02-0</u>			<u>NA</u>	<u>11.0 mg/l TCLP</u>		
K051	<u>API separator sludge from the petroleum refining industry.</u>	<u>Acenaphthene</u>	<u>83-32-9</u>	<u>0.059</u>	<u>NA</u>		

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		<u>Chrysene</u>	<u>2218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Di-n-butyl phthalate</u>	<u>105-67-9</u>	<u>0.057</u>	<u>28</u>
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>NA</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.08</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>
<u>K052</u>	<u>Tank bottoms (leaded) from the petroleum refining industry.</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11</u>	<u>5.6</u>
		<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77</u>	<u>5.6</u>
		<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
		<u>2,4-Dimethylphenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>NA</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.08</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>NA</u>	<u>11.0 mg/l TCLP</u>
<u>K060</u>	<u>Ammonia still lime sludge from coking operations.</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
<u>K061</u>	<u>Emission control dust/sludge from the primary production of steel in electric furnaces.</u>	<u>Antimony</u>	<u>7440-36-0</u>	<u>NA</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>NA</u>	<u>5.0 mg/l TCLP</u>
		<u>Barium</u>	<u>7440-39-3</u>	<u>NA</u>	<u>21 mg/l TCLP</u>
		<u>Beryllium</u>	<u>7440-41-7</u>	<u>NA</u>	<u>1.22 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.025 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		<u>Selenium</u>	<u>7782-49-2</u>	<u>NA</u>	<u>5.7 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K062	<u>Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (standard industrial codes 331 and 332).</u>	<u>Silver</u>	<u>7440-22-4</u>	<u>NA</u>	<u>0.14 mg/l TCLP</u>
		<u>Thallium</u>	<u>7440-28-0</u>	<u>NA</u>	<u>0.20 mg/l TCLP</u>
		<u>Zinc</u>	<u>7440-66-6</u>	<u>NA</u>	<u>4.3 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K069	<u>Emission control dust/sludge from secondary lead smelting - calcium sulfate (low lead) subcategory.</u>	<u>Nicel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>NA</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K071	<u>Emission control dust/sludge from secondary lead smelting - noncalcium sulfate (high lead) subcategory.</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>RLEAD</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.20 mg/l TCLP</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.025 mg/l TCLP</u>
K073	<u>All K071 wastewaters.</u> <u>Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
		<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K083	<u>Distillation bottoms from aniline production.</u>	<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>NA</u>
		<u>Diphenylamine (difficult to distinguish from diphenylnitrosamine)</u>	<u>122-39-4</u>	<u>0.92</u>	<u>13</u>
		<u>Diphenylnitrosamine (difficult to distinguish from diphenylamine)</u>	<u>86-30-6</u>	<u>0.92</u>	<u>13</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
K084	<u>Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
K085	<u>Distillation or fractionation column bottoms from the production of chlorobenzenes.</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
		<u>m-Dichlorobenzene</u>	<u>541-73-1</u>	<u>0.036</u>	<u>6.0</u>
		<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Total PCBs (sum of all PCB isomers, or all Aroclors)</u>	<u>1336-36-3</u>	<u>0.10</u>	<u>10</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K086	<u>Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.</u>	<u>Acetone</u>	<u>67-64-1</u>	<u>0.28</u>	<u>160</u>
		<u>Acetophenone</u>	<u>96-86-2</u>	<u>0.010</u>	<u>9.7</u>
		<u>bis(2-Ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
		<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>5.6</u>	<u>2.6</u>
		<u>Butylbenzyl phthalate</u>	<u>85-68-7</u>	<u>0.017</u>	<u>28</u>
		<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>NA</u>
		<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>0.20</u>	<u>28</u>
		<u>Dimethyl phthalate</u>	<u>131-11-3</u>	<u>0.047</u>	<u>28</u>
		<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
		<u>Di-n-octyl phthalate</u>	<u>117-84-0</u>	<u>0.017</u>	<u>28</u>
		<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>0.34</u>	<u>33</u>
		<u>Ethylbenzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		<u>Methanol</u>	<u>67-56-1</u>	<u>5.6</u>	<u>NA</u>
		<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
		<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>0.14</u>	<u>33</u>
		<u>Methylene chloride</u>	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K087	<u>Decanter tank tar sludge from coking operations.</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Acenaphthylene</u>	<u>208-96-8</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Fluoranthene</u>	<u>206-44-0</u>	<u>0.068</u>	<u>3.4</u>
		<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		K088	<u>Spent potliners from primary aluminum reduction.</u>	<u>Lead</u>	<u>7439-92-1</u>
<u>Acenaphthene</u>	<u>83-32-9</u>			<u>0.059</u>	<u>3.4</u>
<u>Anthracene</u>	<u>120-12-7</u>			<u>0.059</u>	<u>3.4</u>
<u>Benz(a)anthracene</u>	<u>56-55-3</u>			<u>0.059</u>	<u>3.4</u>
<u>Benzo(a)pyrene</u>	<u>50-32-8</u>			<u>0.061</u>	<u>3.4</u>
<u>Benzo(b)fluoranthene</u>	<u>205-99-2</u>			<u>0.11</u>	<u>6.8</u>
<u>Benzo(k)fluoranthene</u>	<u>207-08-09</u>			<u>0.11</u>	<u>6.8</u>
<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>			<u>0.0055</u>	<u>1.8</u>
<u>Chrysene</u>	<u>218-01-9</u>			<u>0.059</u>	<u>3.4</u>
<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>			<u>0.055</u>	<u>8.2</u>
<u>Fluoranthene</u>	<u>206-44-0</u>			<u>0.068</u>	<u>3.4</u>
<u>Indeno(1,2,3-cd)-pyrene</u>	<u>193-39-5</u>			<u>0.0055</u>	<u>3.4</u>
<u>Phenanthrene</u>	<u>85-01-8</u>			<u>0.059</u>	<u>5.6</u>
<u>Pyrene</u>	<u>129-00-0</u>			<u>0.067</u>	<u>8.2</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>26.1</u>
		<u>Barium</u>	<u>7440-39-3</u>	<u>1.2</u>	<u>21 mg/l TCLP</u>
		<u>Beryllium</u>	<u>7440-41-7</u>	<u>0.82</u>	<u>1.22 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>0.025 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11 mg/l TCLP</u>
		<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>0.43</u>	<u>0.14 mg/l TCLP</u>
		<u>Cyanide (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanide (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Fluoride</u>	<u>16984-48-8</u>	<u>35</u>	<u>NA</u>
<u>K093</u>	<u>Distillation light ends from the production of phthalic anhydride from ortho-xylene.</u>	<u>Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)</u>	<u>100-21-0</u>	<u>0.055</u>	<u>28</u>
		<u>Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)</u>	<u>85-44-9</u>	<u>0.055</u>	<u>28</u>
<u>K094</u>	<u>Distillation bottoms from the production of phthalic anhydride from ortho-xylene.</u>	<u>Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)</u>	<u>100-21-0</u>	<u>0.055</u>	<u>28</u>
		<u>Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)</u>	<u>85-44-9</u>	<u>0.055</u>	<u>28</u>
<u>K095</u>	<u>Distillation bottoms from the production of 1,1,1-trichloroethane.</u>	<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
		<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>0.055</u>	<u>6.0</u>
		<u>1,1,1,2-Tetrachloroethane</u>	<u>630-20-6</u>	<u>0.057</u>	<u>6.0</u>
		<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-6</u>	<u>0.057</u>	<u>6.0</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	Trichloroethylene	79-01-6	0.054	6.0
		m-Dichlorobenzene	541-73-1	0.036	6.0
		Pentachloroethane	76-01-7	0.055	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		Hexachlorocyclopentadiene	77-47-4	0.057	2.4
K098	Untreated process wastewater from the production of toxaphene.	Toxaphene	8001-35-2	0.0095	2.6
K099	Untreated wastewater from the production of 2,4-D.	2,4-Dichlorophenoxyacetic acid	94-75-7	0.72	10
		HxCDDs (All Hexa- chlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All hexa- chlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All penta- chlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (all Pentachlorodi- benzofurans)	NA	0.000035	0.001
		TCDDs (All Tetrachloro- dibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachloro- dibenzofurans)	NA	0.000063	0.001

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K100	<u>Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.</u>	<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.069</u>	<u>0.11 mg/l TCLP</u>
		<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K101	<u>Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	<u>o-Nitroaniline</u>	<u>88-74-4</u>	<u>0.27</u>	<u>14</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>NA</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
K102	<u>Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.</u>	<u>o-Nitrophenol</u>	<u>88-75-5</u>	<u>0.028</u>	<u>13</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>NA</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>NA</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
K103	<u>Process residues from aniline extraction from the production of aniline.</u>	<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>0.12</u>	<u>160</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
K104	<u>Combined wastewater streams generated from nitrobenzene/aniline production.</u>	<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K105	<u>Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.</u>	<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>0.12</u>	<u>160</u>
		<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
		<u>2-Chlorophenol</u>	<u>95-57-8</u>	<u>0.044</u>	<u>5.7</u>
		<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
K106	<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>	
	<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>	
	<u>K106 (Wastewater treatment sludge from the mercury cell process in chlorine production.) Nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>RMERC</u>
	<u>K106 (wastewater treatment sludge from the mercury cell process in chlorine production.) Nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.20 mg/l TCLP</u>
K106	<u>Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.025 mg/l TCLP</u>
	<u>All K106 wastewaters.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
K107	<u>Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	<u>NA</u>	<u>NA</u>	<u>CMBST; or CHOXD fb CARBN; or BIODG fb CARBN</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K108	<u>Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	NA	NA	<u>CMBST; or CHOXD fb CARBN; or BIODG fb CARBN</u>	<u>CMBST</u>
K109	<u>Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	NA	NA	<u>CMBST; or CHOXD fb CARBN; or BIODG fb CARBN</u>	<u>CMBST</u>
K110	<u>Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.</u>	NA	NA	<u>CMBST; or CHOXD fb CARBN; or BIODG fb CARBN</u>	<u>CMBST</u>
K111	<u>Product washwaters from the production of dinitrotoluene via nitration of toluene.</u>	<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>0.32</u>	<u>140</u>
		<u>2,6-Dinitrotoluene</u>	<u>606-20-2</u>	<u>0.55</u>	<u>28</u>
K112	<u>Reaction byproduct water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	NA	NA	<u>CMBST; or CHOXD fb CARBN; or BIODG fb CARBN</u>	<u>CMBST</u>
K113	<u>Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	NA	NA	<u>CARBN; or CMBST</u>	<u>CMBST</u>
K114	<u>Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	NA	NA	<u>CARBN; or CMBST</u>	<u>CMBST</u>
K115	<u>Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.</u>	<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11 mg/l TCLP</u>
		NA	NA	<u>CARBN; or CMBST</u>	<u>CMBST</u>
K116	<u>Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.</u>	NA	NA	<u>CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K117	<u>Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethane.</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
		<u>Chloroform</u>	<u>67-63-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
K118	<u>Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
K123	<u>Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.</u>	<u>NA</u>	<u>NA</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN)</u>	<u>CMBST</u>
K124	<u>Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.</u>	<u>NA</u>	<u>NA</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN)</u>	<u>CMBST</u>
K125	<u>Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.</u>	<u>NA</u>	<u>Na</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN)</u>	<u>CMBST</u>
K126	<u>Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.</u>	<u>NA</u>	<u>NA</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN)</u>	<u>CMBST</u>
K131	<u>Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
K132	<u>Spent absorbent and wastewater separator solids from the production of methyl bromide.</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K136	<u>Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
K141	<u>Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke byproducts produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations).</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-2-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
K142	<u>Tar storage tank residues from the production of coke from coal or from the recovery of coke byproducts produced from coal.</u>	<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K143	<u>Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke byproducts produced from coal.</u>	<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
K144	<u>Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke byproducts produced from coal.</u>	<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
K145	<u>Residues from naphthalene collection and recovery operations from the recovery of coke byproducts produced from coal.</u>	<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K147	<u>Tar storage tank residues from coal tar refining.</u>	<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
		<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
K148	<u>Residues from coal tar distillation, including, but not limited to, still bottoms.</u>	<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
		<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
		<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
		<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
		<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
K149	<u>Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillations of benzyl chloride.)</u>	<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K150	<u>Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.</u>	<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Chloromethane</u>	<u>74-87-3</u>	<u>0.19</u>	<u>30</u>
		<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Chloromethane</u>	<u>74-87-3</u>	<u>0.19</u>	<u>30</u>
K151	<u>Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.</u>	<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K156	<u>Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
		<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
		<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
		<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
		<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>1.8</u>
		<u>Acetophenone</u>	<u>98-86-2</u>	<u>0.010</u>	<u>9.7</u>
		<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>Benomyl¹⁰</u>	<u>17804-35-2</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Carbaryl¹⁰</u>	<u>63-25-21</u>	<u>0.006; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>
		<u>Carbenzadim¹⁰</u>	<u>10605-21-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Carbofuran¹⁰</u>	<u>1563-66-2</u>	<u>0.006; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>
		<u>Carbosulfan¹⁰</u>	<u>55285-14-8</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>		
<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>		
<u>Methomyl¹⁰</u>	<u>16752-77-5</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>		

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		Methylene chloride	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
		Methyl ethyl ketone	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
		Naphthalene	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		Phenol	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		Pyridine	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
		Toluene	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		Triethylamine	<u>121-44-8</u>	<u>0.081; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.5; or CMBST</u>
<u>K157</u>	<u>Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	Carbon tetrachloride	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
		Chloroform	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		Chloromethane	<u>74-87-3</u>	<u>0.19</u>	<u>30</u>
		Methomyl ¹⁰	<u>16752-77-5</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>
		Methylene chloride	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
		Methyl ethyl ketone	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
		Pyridine	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
		Triethylamine	<u>121-44-8</u>	<u>0.081; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.5; or CMBST</u>
<u>K158</u>	<u>Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)</u>	Benzene	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		Carbenzadim ¹⁰	<u>10605-21-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K159	<u>Organics from the treatment of thiocarbamate wastes.</u>	<u>Carbofuran¹⁰</u>	<u>1563-66-2</u>	<u>0.006; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>
		<u>Carbosulfan¹⁰</u>	<u>55285-14-8</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
		<u>Methylene chloride</u>	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
		<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
		<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		<u>Butylate¹⁰</u>	<u>2008-41-5</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>EPTC (Eptam¹⁰)</u>	<u>759-94-4</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Molinate¹⁰</u>	<u>2212-67-1</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Pebulate¹⁰</u>	<u>1114-71-2</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
K161	<u>Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings, from the production of dithiocarbamate acids and their salts.</u>	<u>Vernolate¹⁰</u>	<u>1929-77-7</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
		<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>4.8 mg/l TCLP</u>
		<u>Dithiocarbamates (total)¹⁰</u>	<u>NA</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>28; or CMBST</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
K169	<u>Crude oil tank sediment from petroleum refining operations.</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
		<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K170	Clarified slurry oil sediment from petroleum refining operations.	Benzene	71-43-2	0.14	10
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Ethyl benzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	81-05-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (methyl benzene)	108-88-3	0.080	10
		Xylene(s)(Total)	1330-20-7	0.32	30
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
K171	Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).	Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Ethyl benzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	3.4
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	81-05-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl benzene)	108-88-3	0.080	10
		Xylene(s)(Total)	1330-20-7	0.32	30
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		Chrysene	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
		Ethyl benzene	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
		Naphthalene	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
		Phenanthrene	<u>81-05-8</u>	<u>0.059</u>	<u>5.6</u>
		Pyrene	<u>129-00-0</u>	<u>0.67</u>	<u>8.2</u>
		Toluene (Methyl benzene)	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		Xylene(s)(Total)	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		Arsenic	<u>7740-38-2</u>	<u>1.4</u>	<u>5 mg/l TCLP</u>
		Nickel	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		Vanadium	<u>7440-62-2</u>	<u>4.3</u>	<u>1.6 mg/l TCLP</u>
		Reactive sulfides	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
<u>K172</u>	<u>Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).</u>	Benzene	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
		Ethyl benzene	<u>100-41-4</u>	<u>0.57</u>	<u>10</u>
		Toluene (Methyl benzene)	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
		Xylene(s)(Total)	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
		Antimony	<u>7740-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		Arsenic	<u>7740-38-2</u>	<u>1.4</u>	<u>5 mg/l TCLP</u>
		Nickel	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
		Vanadium	<u>7440-62-2</u>	<u>4.3</u>	<u>1.6 mg/l TCLP</u>
		Reactive sulfides	<u>NA</u>	<u>DEACT</u>	<u>DEACT</u>
<u>K174</u>	<u>Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer.</u>	<u>1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)</u>	<u>35822-46-9</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8- Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)</u>	<u>67562-39-4</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>
		<u>1,2,3,4,7,8,9- Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)</u>	<u>55673-89-7</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>34465-46-8</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>55684-94-1</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin (OCDD)</u>	<u>3268-87-9</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.005 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzofuran (OCDF)</u>	<u>39001-02-0</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.005 or CMBST¹¹</u>
		<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>36088-22-9</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>PeCDFs (All Pentachlorodibenzofurans)</u>	<u>30402-15-4</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>41903-57-5</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>55722-27-5</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
<u>K175</u>	<u>Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process.</u>	<u>Mercury¹²</u>	<u>7438-97-6</u>	<u>NA</u>	<u>0.025 mg/l TCLP</u>
		<u>pH¹²</u>	<u>NA</u>	<u>NA</u>	<u>pH ≤ 6.0</u>
	<u>All K175 wastewaters.</u>	<u>Mercury</u>	<u>7438-97-6</u>	<u>0.15</u>	<u>NA</u>
<u>K176</u>	<u>Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (for example, antimony metal or crude antimony oxide).</u>	<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
		<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>0.025 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K177	<u>Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (for example, antimony metal or crude antimony oxide).</u>	<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
		<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
		<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
K178	<u>Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process.</u>	<u>1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)</u>	<u>35822-39-4</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8- Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)</u>	<u>67562-39-4</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,9- Heptachlorodibenzofuran (1,2,3,4,6,7,9-HpCDF)</u>	<u>55673-89-7</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.0025 or CMBST¹¹</u>
		<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>34465-46-8</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>55684-94-1</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin (OCDD)</u>	<u>3268-87-9</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.005 or CMBST¹¹</u>
		<u>1,2,3,4,6,7,8,9- Octachlorodibenzofuran (OCDF)</u>	<u>39001-02-0</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.005 or CMBST¹¹</u>
		<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>36088-22-9</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>PeCDFs (All Pentachlorodibenzofurans)</u>	<u>30402-15-4</u>	<u>0.000035 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>41903-57-5</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
		<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>55722-27-5</u>	<u>0.000063 or CMBST¹¹</u>	<u>0.001 or CMBST¹¹</u>
	<u>Thallium</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>0.20 mg/l TCLP</u>	

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
K181	<u>Nonwastewaters from the production of dyes or pigments, or both, (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in subsection 3 of section 33.1-24-02-17 that are equal to or greater than the corresponding subsection 3 of section 33.1-24-02-17 levels, as determined on a calendar year basis.</u>	<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
		<u>o-Anisidine (2-methoxyaniline)</u>	<u>90-04-0</u>	<u>0.010</u>	<u>0.66</u>
		<u>4-Chloroaniline</u>	<u>106-47-8</u>	<u>0.46</u>	<u>16</u>
		<u>p-Cresidine</u>	<u>120-71-8</u>	<u>0.010</u>	<u>0.66</u>
		<u>2,4-Dimethylaniline (2,4-xylidine)</u>	<u>95-68-1</u>	<u>0.010</u>	<u>0.66</u>
		<u>1,2-Phenylenediamine</u>	<u>95-54-5</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN</u>
		<u>1,3-Phenylenediamine</u>	<u>108-45-2</u>	<u>0.010</u>	<u>0.66</u>
P001	<u>Warfarin, and salts, when present at concentrations greater than 0.3 percent.</u>	<u>Warfarin</u>	<u>81-81-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P002	<u>1-Acetyl-2-thiourea</u>	<u>1-Acetyl-2-thiourea</u>	<u>591-08-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P003	<u>Acrolein</u>	<u>Acrolein</u>	<u>107-02-8</u>	<u>0.29</u>	<u>CMBST</u>
P004	<u>Aldrin</u>	<u>Aldrin</u>	<u>309-00-2</u>	<u>0.021</u>	<u>0.066</u>
P005	<u>Allyl alcohol</u>	<u>Allyl alcohol</u>	<u>107-18-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P006	<u>Aluminum phosphide</u>	<u>Aluminum phosphide</u>	<u>20859-73-8</u>	<u>CHOXD; CHRED; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
P007	<u>5-Aminomethyl 3-isoxazolol</u>	<u>5-Aminomethyl 3-isoxazolol</u>	<u>2763-96-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P008	<u>4-Aminopyridine</u>	<u>4-Aminopyridine</u>	<u>504-24-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P009	<u>Ammonium picrate</u>	<u>Ammonium picrate</u>	<u>131-74-8</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
P010	<u>Arsenic acid</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
P011	<u>Arsenic pentoxide</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
P012	<u>Arsenic trioxide</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
P013	<u>Barium cyanide</u>	<u>Barium</u>	<u>7440-39-3</u>	<u>NA</u>	<u>21 mg/l TCLP</u>
		<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P014	<u>Thiophenol (Benzene thiol)</u>	<u>Thiophenol (Benzene thiol)</u>	<u>108-98-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P015	<u>Beryllium dust</u>	<u>Beryllium</u>	<u>7440-41-7</u>	<u>RMETL; or RTHRM</u>	<u>RMETL; or RTHRM</u>
P016	<u>Dichloromethyl ether (Bis(chloromethyl)ether)</u>	<u>Dichloromethyl ether</u>	<u>542-88-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P017	<u>Bromoacetone</u>	<u>Bromoacetone</u>	<u>598-31-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P018	<u>Brucine</u>	<u>Brucine</u>	<u>357-57-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P020	<u>2-sec-Butyl-4,6-dinitrophenol (Dinoseb)</u>	<u>2-sec-Butyl-4,6-dinitrophenol (Dinoseb)</u>	<u>88-85-7</u>	<u>0.066</u>	<u>2.5</u>
P021	<u>Calcium cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P022	<u>Carbon disulfide</u>	<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>CMBST</u>
		<u>Carbon disulfide; alternate⁶ standard for nonwastewaters only</u>	<u>75-15-0</u>	<u>NA</u>	<u>4.8 mg/l TCLP</u>
P023	<u>Chloroacetaldehyde</u>	<u>Chloroacetaldehyde</u>	<u>107-20-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P024	<u>p-Chloroaniline</u>	<u>p-Chloroaniline</u>	<u>106-47-8</u>	<u>0.46</u>	<u>16</u>
P026	<u>1-(o-Chlorophenyl)thiourea</u>	<u>1-(o-Chlorophenyl)thiourea</u>	<u>5344-82-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P027	<u>3-Chloropropionitrile</u>	<u>3-Chloropropionitrile</u>	<u>542-76-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P028	<u>Benzyl chloride</u>	<u>Benzyl chloride</u>	<u>100-44-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P029	<u>Copper cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P030	<u>Cyanides (soluble salts and complexes)</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P031	<u>Cyanogen</u>	<u>Cyanogen</u>	<u>460-19-5</u>	<u>CHOXD; WETOX; or CMBST</u>	<u>CHOXD; WETOX; or CMBST</u>
P033	<u>Cyanogen chloride</u>	<u>Cyanogen chloride</u>	<u>506-77-4</u>	<u>CHOXD; WETOX; or CMBST</u>	<u>CHOXD; WETOX; or CMBST</u>
P034	<u>2-Cyclohexyl-4,6-dinitrophenol</u>	<u>2-Cyclohexyl-4,6-dinitrophenol</u>	<u>131-89-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P036	<u>Dichlorophenylarsine</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
P037	<u>Dieldrin</u>	<u>Dieldrin</u>	<u>60-57-1</u>	<u>0.017</u>	<u>0.13</u>
P038	<u>Diethylarine</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
P039	<u>Disulfoton</u>	<u>Disulfoton</u>	<u>298-04-4</u>	<u>0.017</u>	<u>6.2</u>
P040	<u>0,0-Diethyl O-pyrazinyl phosphorothioate</u>	<u>0,0-Diethyl O-pyrazinyl phosphorothioate</u>	<u>297-97-2</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P041	<u>Diethyl-p-nitrophenyl phosphate</u>	<u>Diethyl-p-nitrophenyl phosphate</u>	<u>311-45-5</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P042	<u>Epinephrine</u>	<u>Epinephrine</u>	<u>51-43-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P043	<u>Diisopropylfluorophosphate (DFP)</u>	<u>Diisopropylfluorophosphate (DFP)</u>	<u>55-91-4</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P044	<u>Dimethoate</u>	<u>Dimethoate</u>	<u>60-51-5</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P045	<u>Thiofanox</u>	<u>Thiofanox</u>	<u>39196-18-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P046	<u>Alpha, alpha-Dimethyl-phenethylamine</u>	<u>alpha, alpha-Dimethyl-phenethylamine</u>	<u>122-09-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P047	<u>4,6-Dinitro-o-cresol</u>	<u>4,6-Dinitro-o-cresol</u>	<u>543-52-1</u>	<u>0.28</u>	<u>160</u>
	<u>4,6-Dinitro-o-cresol salts</u>	<u>NA</u>	<u>NA</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P048	<u>2,4-Dinitrophenol</u>	<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>0.12</u>	<u>160</u>
P049	<u>Dithiobiuret</u>	<u>Dithiobiuret</u>	<u>541-53-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P050	<u>Endosulfan</u>	<u>Endosulfan I</u>	<u>939-98-8</u>	<u>0.023</u>	<u>0.066</u>
		<u>Endosulfan II</u>	<u>33213-6-5</u>	<u>0.029</u>	<u>0.13</u>
		<u>Endosulfan sulfate</u>	<u>1031-07-8</u>	<u>0.029</u>	<u>0.13</u>
P051	<u>Endrin</u>	<u>Endrin</u>	<u>72-20-8</u>	<u>0.0028</u>	<u>0.13</u>
		<u>Endrin aldehyde</u>	<u>7421-93-4</u>	<u>0.025</u>	<u>0.13</u>
P054	<u>Aziridine</u>	<u>Aziridine</u>	<u>151-56-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P056	<u>Fluorine</u>	<u>Fluoride (measured in wastewaters only)</u>	<u>16964-48-8</u>	<u>35</u>	<u>ADGAS fb NEUTR</u>
P057	<u>Fluoroacetamide</u>	<u>Fluoroacetamide</u>	<u>640-19-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P058	<u>Fluoroacetic acid, sodium salt</u>	<u>Fluoroacetic acid, sodium salt</u>	<u>62-74-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P059	<u>Heptachlor</u>	<u>Heptachlor</u>	<u>76-44-8</u>	<u>0.0012</u>	<u>0.066</u>
		<u>Heptachlor epoxide</u>	<u>10234-57-3</u>	<u>0.016</u>	<u>0.066</u>
P060	<u>Isodrin</u>	<u>Isodrin</u>	<u>465-73-6</u>	<u>0.021</u>	<u>0.066</u>
P062	<u>Hexaethyl tetraphosphate</u>	<u>Hexaethyl tetraphosphate</u>	<u>757-58-4</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P063	<u>Hydrogen cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P064	<u>Isocyanic acid, ethyl ester</u>	<u>Isocyanic acid, ethyl ester</u>	<u>624-83-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P065	<u>Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>IMERC</u>
	<u>Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury.</u>	<u>Mercury</u>	<u>7339-97-6</u>	<u>NA</u>	<u>RMERC</u>
	<u>Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.20 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
	<u>Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.025 mg/l TCLP</u>
	<u>All mercury fulminate wastewaters.</u>	<u>Mercury</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>NA</u>
<u>P066</u>	<u>Methomyl</u>	<u>Methomyl</u>	<u>16752-77-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P067</u>	<u>2-Methyl-aziridine</u>	<u>2-Methyl-aziridine</u>	<u>75-55-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P068</u>	<u>Methyl hydrazine</u>	<u>Methyl hydrazine</u>	<u>60-34-4</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED. OR CMBST</u>
<u>P069</u>	<u>2-Methylactonitrile</u>	<u>2-Methylactonitrile</u>	<u>75-86-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P070</u>	<u>Aldicarb</u>	<u>Aldicarb</u>	<u>116-06-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P071</u>	<u>Methyl parathion</u>	<u>Methyl parathion</u>	<u>298-00-0</u>	<u>0.014</u>	<u>4.6</u>
<u>P072</u>	<u>1-Naphthyl-2-thiourea</u>	<u>1-Naphthyl-2-thiourea</u>	<u>86-88-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P073</u>	<u>Nickel carbonyl</u>	<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
<u>P074</u>	<u>Nickel-cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11.0 mg/l TCLP</u>
<u>P075</u>	<u>Nicotine and salts</u>	<u>Nicotine and salts</u>	<u>54-11-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P076</u>	<u>Nitric oxide</u>	<u>Nitric oxide</u>	<u>10102-43-9</u>	<u>ADGAS</u>	<u>ADGAS</u>
<u>P077</u>	<u>p-Nitroaniline</u>	<u>p-Nitroaniline</u>	<u>100-01-6</u>	<u>0.028</u>	<u>28</u>
<u>P078</u>	<u>Nitrogen dioxide</u>	<u>Nitrogen dioxide</u>	<u>10102-44-0</u>	<u>ADGAS</u>	<u>ADGAS</u>
<u>P081</u>	<u>Nitroglycerin</u>	<u>Nitroglycerin</u>	<u>55-63-0</u>	<u>CHOXD; CHRED; CARBN; BIODG or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
<u>P082</u>	<u>N-Nitrosodimethylamine</u>	<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>	<u>0.40</u>	<u>2.3</u>
<u>P084</u>	<u>N-Nitrosomethylvinylamine</u>	<u>N-Nitrosomethylvinylamine</u>	<u>4549-40-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>P085</u>	<u>Octamethylpyrophosphoramidate</u>	<u>Octamethylpyrophosphoramidate</u>	<u>152-16-9</u>	<u>CARBAN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P087	Osmium tetroxide	Osmium tetroxide	20816-12-0	RMETL; or RTHRM	RMETL; or RTHRM
P088	Endothall	Endothall	145-73-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P089	Parathion	Parathion	56-38-2	0.014	4.6
P092	Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC.	Mercury	7439-97-6	NA	IMERC; or RMERC
	Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 160 mg/kg total mercury.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All phenyl mercuric acetate wastewaters.	Mercury	7439-97-6	0.15	NA
P093	Phenylthiourea	Phenylthiourea	103-85-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P094	Phorate	Phorate	298-02-2	0.021	4.6
P095	Phosgene	Phosgene	75-44-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P096	Phosphine	Phosphine	7803-51-2	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P097	Famphur	Famphur	52-85-7	0.017	15
P098	Postassium cyanide	Cyanides (Total) ⁷	57-12-5	1.2	590
		Cyanides (Amenable) ⁷	57-12-5	0.86	30

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P099	<u>Potassium silver cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>0.43</u>	<u>0.14 mg/l TCLP</u>
P101	<u>Ethyl cyanide (Propanenitrile)</u>	<u>Ethyl cyanide (Propanenitrile)</u>	<u>107-12-0</u>	<u>0.24</u>	<u>360</u>
P102	<u>Propargyl alcohol</u>	<u>Propargyl alcohol</u>	<u>107-19-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P103	<u>Selenourea</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
P104	<u>Silver cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
		<u>Silver</u>	<u>7440-22-4</u>	<u>0.43</u>	<u>0.14 mg/l TCLP</u>
P105	<u>Sodium azide</u>	<u>Sodium azide</u>	<u>26628-22-8</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
P106	<u>Sodium cyanide</u>	<u>Cyanides (Total)⁷</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
		<u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
P108	<u>Strychnine and salts</u>	<u>Strychnine and salts</u>	<u>57-24-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P109	<u>Tetraethyldithiopyrophosphate</u>	<u>Tetraethyl- dithiopyrophosphate</u>	<u>3689-24-5</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P110	<u>Tetraethyl lead</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
P111	<u>Tetraethylpyrophosphate</u>	<u>Tetraethylpyrophosphate</u>	<u>107-49-3</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
P112	<u>Tetranitromethane</u>	<u>Tetranitromethane</u>	<u>509-14-8</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
P113	<u>Thallic oxide</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
P114	<u>Thallium selenite</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
P115	<u>Thallium (I) sulfate</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
P116	<u>Thiosemicarbazide</u>	<u>Thiosemicarbazide</u>	<u>79-19-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
P118	<u>Trichloromethanethiol</u>	<u>Trichloromethanethiol</u>	<u>75-70-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
P119	<u>Ammonium vanadate</u>	<u>Vanadium (measured in wastewaters only)</u>	<u>7440-62-2</u>	<u>4.3</u>	<u>STABL</u>
P120	<u>Vanadium pentoxide</u>	<u>Vanadium (measured in wastewaters only)</u>	<u>7440-62-2</u>	<u>4.3</u>	<u>STABL</u>
P121	<u>Zinc cyanide</u>	<u>Cyanides (Total)⁷</u> <u>Cyanides (Amenable)⁷</u>	<u>57-12-5</u> <u>57-12-5</u>	<u>1.2</u> <u>0.86</u>	<u>590</u> <u>30</u>
P122	<u>Zinc phosphide Zn₃P₂, when present at concentrations greater than 10 percent.</u>	<u>Zinc Phosphide</u>	<u>1314-84-7</u>	<u>CHOXD; CHRED; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
P123	<u>Toxaphene</u>	<u>Toxaphene</u>	<u>8001-35-2</u>	<u>0.0095</u>	<u>2.6</u>
P127	<u>Carbofuran¹⁰</u>	<u>Carbofuran</u>	<u>1563-66-2</u>	<u>0.006; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>
P128	<u>Mexacarbate¹⁰</u>	<u>Mexacarbate</u>	<u>315-18-4</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P185	<u>Tirpate¹⁰</u>	<u>Tirpate</u>	<u>26419-73-8</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.28; or CMBST</u>
P188	<u>Physostigmine salicylate¹⁰</u>	<u>Physostigmine salicylate</u>	<u>57-64-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P189	<u>Carbosulfan¹⁰</u>	<u>Carbosulfan</u>	<u>55285-14-8</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P190	<u>Metolcarb¹⁰</u>	<u>Metolcarb</u>	<u>1129-41-5</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P191	<u>Dimetilan¹⁰</u>	<u>Dimetilan</u>	<u>644-64-4</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P192	<u>Isolan¹⁰</u>	<u>Isolan</u>	<u>119-38-0</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P194	<u>Oxamy¹⁰</u>	<u>Oxamy</u>	<u>23135-22-0</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.28; or CMBST</u>
P196	<u>Manganese dimethyldithio-carbamate¹⁰</u>	<u>Dithiocarbamates (total)</u>	<u>NA</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>28; or CMBST</u>
P197	<u>Formparanate¹⁰</u>	<u>Formparanate</u>	<u>17702-57-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
P198	<u>Formetanate hydrochloride¹⁰</u>	<u>Formetanate hydrochloride</u>	<u>23422-53-9</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>P199</u>	<u>Methiocarb¹⁰</u>	<u>Methiocarb</u>	<u>2032-65-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>P201</u>	<u>Promecarb¹⁰</u>	<u>Promecarb</u>	<u>2631-37-0</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>P202</u>	<u>m-Cumenyl methylcarbamate¹⁰</u>	<u>m-Cumenyl methylcarbamate</u>	<u>64-00-6</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>P203</u>	<u>Aldicarb sulfone¹⁰</u>	<u>Aldicarb sulfone</u>	<u>1646-88-4</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.28; or CMBST</u>
<u>P204</u>	<u>Physostigmine¹⁰</u>	<u>Physostigmine</u>	<u>57-47-6</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>P205</u>	<u>Ziram¹⁰</u>	<u>Dithiocarbamates (total)</u>	<u>NA</u>	<u>0.028; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>28; or CMBST</u>
<u>U001</u>	<u>Acetaldehyde</u>	<u>Acetaldehyde</u>	<u>75-07-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U002</u>	<u>Acetone</u>	<u>Acetone</u>	<u>67-64-1</u>	<u>0.28</u>	<u>160</u>
<u>U003</u>	<u>Acetonitrile</u>	<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>CMBST</u>
		<u>Acetonitrile; alternate⁶ standard for nonwastewaters only</u>	<u>75-05-8</u>	<u>NA</u>	<u>38</u>
<u>U004</u>	<u>Acetophenone</u>	<u>Acetophenone</u>	<u>98-86-2</u>	<u>0.010</u>	<u>9.7</u>
<u>U005</u>	<u>2-Acetylaminofluorene</u>	<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>	<u>0.059</u>	<u>140</u>
<u>U006</u>	<u>Acetyl chloride</u>	<u>Acetyl Chloride</u>	<u>75-36-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U007</u>	<u>Acrylamide</u>	<u>Acrylamide</u>	<u>79-06-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U008</u>	<u>Acrylic acid</u>	<u>Acrylic acid</u>	<u>79-10-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U009</u>	<u>Acrylonitrile</u>	<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
<u>U010</u>	<u>Mitomycin C</u>	<u>Mitomycin C</u>	<u>50-07-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U011</u>	<u>Amitrole</u>	<u>Amitrole</u>	<u>61-82-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U012</u>	<u>Aniline</u>	<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Common Name</u>	<u>CAS²No.</u>	<u>Wastewaters</u>	<u>Nonwastewaters</u>
				<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U014	<u>Auramine</u>	<u>Auramine</u>	<u>492-80-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U015	<u>Azaserine</u>	<u>Azaserine</u>	<u>115-02-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U016	<u>Benz(c)acridine</u>	<u>Benz(c)acridine</u>	<u>225-51-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U017	<u>Benzal chloride</u>	<u>Benzal chloride</u>	<u>98-87-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U018	<u>Benz(a)anthracene</u>	<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
U019	<u>Benzene</u>	<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>
U020	<u>Benzenesulfonyl chloride</u>	<u>Benzenesulfonyl chloride</u>	<u>98-09-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U021	<u>Benzidine</u>	<u>Benzidine</u>	<u>92-87-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U022	<u>Benzo(a)pyrene</u>	<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
U023	<u>Benzo(a)trichloride</u>	<u>Benzo(a)trichloride</u>	<u>98-07-7</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U024	<u>bis(2-Chloroethoxy)methane</u>	<u>bis(2-Chloroethoxy)methane</u>	<u>111-91-1</u>	<u>0.036</u>	<u>7.2</u>
U025	<u>bis(2-Chloroethyl)ether</u>	<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>0.033</u>	<u>6.0</u>
U026	<u>Chlornaphazine</u>	<u>Chlornaphazine</u>	<u>494-03-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U027	<u>bis(2-Chloroisopropyl)ether</u>	<u>bis(2-Chloroisopropyl)ether</u>	<u>39638-32-9</u>	<u>0.055</u>	<u>7.2</u>
U028	<u>bis(2-Ethylhexyl)phthalate</u>	<u>bis(2-Ethylhexyl)phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
U029	<u>Methyl bromide (Bromomethane)</u>	<u>Methyl bromide (Bromomethane)</u>	<u>74-89-9</u>	<u>0.11</u>	<u>15</u>
U030	<u>4-Bromophenyl phenyl ether</u>	<u>4-Bromophenyl phenyl ether</u>	<u>101-55-3</u>	<u>0.055</u>	<u>15</u>
U031	<u>n-Butyl alcohol</u>	<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>5.6</u>	<u>2.6</u>
U032	<u>Calcium chromate</u>	<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
U033	<u>Carbon oxyfluoride</u>	<u>Carbon oxyfluoride</u>	<u>353-50-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U034	<u>Trichloroacetaldehyde (Chloral)</u>	<u>Trichloroacetaldehyde (Chloral)</u>	<u>75-87-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U035	Chlorambucil	Chlorambucil	305-03-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U036	Chlordane	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
U037	Chlorobenzene	Chlorobenzene	108-90-7	0.057	6.0
U038	Chlorobenzilate	Chlorobenzilate	510-15-6	0.10	CMBST
U039	p-Chloro-m-cresol	p-Chloro-m-cresol	59-50-7	0.018	14
U041	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U042	2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether	110-75-8	0.062	CMBST
U043	Vinyl chloride	Vinyl chloride	75-01-4	0.27	6.0
U044	Chloroform	Chloroform	67-66-3	0.046	6.0
U045	Chloromethane (Methyl chloride)	Chloromethane (Methyl chloride)	74-87-3	0.19	30
U046	Chloromethyl methyl ether	Chloromethyl methyl ether	107-30-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U047	2-Chloronaphthalene	2-Chloronaphthalene	91-58-7	0.055	5.6
U048	2-Chlorophenol	2-Chlorophenol	95-57-8	0.044	5.7
U049	4-Chloro-o-toluidine hydrochloride	4-Chloro-o-toluidine hydrochloride	3165-93-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U050	Chrysene	Chrysene	218-01-9	0.059	3.4
U051	Creosote	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
U052	Cresols (Cresylic acid)	o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
		<u>p-Cresol (difficult to distinguish from m-cresol)</u>	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
		<u>Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)</u>	<u>1319-77-3</u>	<u>0.88</u>	<u>11.2</u>
<u>U053</u>	<u>Crotonaldehyde</u>	<u>Crotonaldehyde</u>	<u>4170-30-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U055</u>	<u>Cumene</u>	<u>Cumene</u>	<u>98-82-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U056</u>	<u>Cyclohexane</u>	<u>Cyclohexane</u>	<u>110-82-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U057</u>	<u>Cyclohexanone</u>	<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>CMBST</u>
		<u>Cyclohexanone; alternate⁶ standard for nonwastewaters only</u>	<u>108-94-1</u>	<u>NA</u>	<u>0.75 mg/l TCLP</u>
<u>U058</u>	<u>Cyclophosphamide</u>	<u>Cyclophosphamide</u>	<u>50-18-0</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
<u>U059</u>	<u>Daunomycin</u>	<u>Daunomycin</u>	<u>20830-81-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U060</u>	<u>DDD</u>	<u>o,p'-DDD</u>	<u>53-19-0</u>	<u>0.023</u>	<u>0.087</u>
		<u>p,p'-DDD</u>	<u>72-54-8</u>	<u>0.023</u>	<u>0.087</u>
<u>U061</u>	<u>DDT</u>	<u>o,p'-DDT</u>	<u>789-02-6</u>	<u>0.0039</u>	<u>0.087</u>
		<u>p,p'-DDT</u>	<u>50-29-3</u>	<u>0.0039</u>	<u>0.087</u>
		<u>o,p'-DDD</u>	<u>53-19-0</u>	<u>0.023</u>	<u>0.087</u>
		<u>p,p'-DDD</u>	<u>72-54-8</u>	<u>0.023</u>	<u>0.087</u>
		<u>o,p'-DDE</u>	<u>3424-82-6</u>	<u>0.031</u>	<u>0.087</u>
		<u>p,p'-DDE</u>	<u>72-55-9</u>	<u>0.031</u>	<u>0.087</u>
<u>U062</u>	<u>Diallate</u>	<u>Diallate</u>	<u>2303-16-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U063</u>	<u>Dibenz(a,h)anthracene</u>	<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
<u>U064</u>	<u>Dibenz(a,i)pyrene</u>	<u>Dibenz(a,i)pyrene</u>	<u>189-55-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U066</u>	<u>1,2-Dibromo-3-chloropropane</u>	<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>0.11</u>	<u>15</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U067	<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>Ethylene dibromide (1,2-Dibromoethane)</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
U068	<u>Dibromomethane</u>	<u>Dibromomethane</u>	<u>74-95-3</u>	<u>0.11</u>	<u>15</u>
U069	<u>Di-n-butyl phthalate</u>	<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
U070	<u>o-Dichlorobenzene</u>	<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
U071	<u>m-Dichlorobenzene</u>	<u>m-Dichlorobenzene</u>	<u>541-73-1</u>	<u>0.036</u>	<u>6.0</u>
U072	<u>p-Dichlorobenzene</u>	<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
U073	<u>3,3'-Dichlorobenzidine</u>	<u>3,3'-Dichlorobenzidine</u>	<u>91-94-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U074	<u>1,4-Dichloro-2-butene</u>	<u>cis-1,4-Dichloro-2-butene</u>	<u>1476-11-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
		<u>trans-1,4-Dichloro-2-butene</u>	<u>764-41-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U075	<u>Dichlorodifluoromethane</u>	<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>0.23</u>	<u>7.2</u>
U076	<u>1,1-Dichloroethane</u>	<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>0.059</u>	<u>6.0</u>
U077	<u>1,2-Dichloroethane</u>	<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
U078	<u>1,1-Dichloroethylene</u>	<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025</u>	<u>6.0</u>
U079	<u>1,2-Dichloroethylene</u>	<u>trans-1,2-Dichloroethylene</u>	<u>156-60-5</u>	<u>0.054</u>	<u>30</u>
U080	<u>Methylene chloride</u>	<u>Methylene chloride</u>	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
U081	<u>2,4-Dichlorophenol</u>	<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>0.044</u>	<u>14</u>
U082	<u>2,6-Dichlorophenol</u>	<u>2,6-Dichlorophenol</u>	<u>87-65-0</u>	<u>0.044</u>	<u>14</u>
U083	<u>1,2-Dichloropropane</u>	<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>0.85</u>	<u>18</u>
U084	<u>1,3-Dichloropropylene</u>	<u>cis-1,3-Dichloropropylene</u>	<u>10061-01-5</u>	<u>0.036</u>	<u>18</u>
		<u>trans-1,3-Dichloropropylene</u>	<u>10061-02-6</u>	<u>0.036</u>	<u>18</u>
U085	<u>1,2:3,4-Diepoxybutane</u>	<u>1,2:3,4-Diepoxybutane</u>	<u>1464-53-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U086	<u>N,N'-Diethylhydrazine</u>	<u>N,N'-Diethylhydrazine</u>	<u>1615-80-1</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U087	<u>O,O-Diethyl S-methyldithiophosphate</u>	<u>O,O-Diethyl S-methyldithiophosphate</u>	<u>3288-58-2</u>	<u>CARBN; CMBST</u>	<u>CMBST</u>
U088	<u>Diethyl phthalate</u>	<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>0.20</u>	<u>28</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U089	<u>Diethyl stilbestrol</u>	<u>Diethyl stilbestrol</u>	<u>56-53-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U090	<u>Dihydrosafrole</u>	<u>Dihydrosafrole</u>	<u>94-58-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U091	<u>3,3'-Dimethoxybenzidine</u>	<u>3,3'-Dimethoxybenzidine</u>	<u>119-90-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U092	<u>Dimethylamine</u>	<u>Dimethylamine</u>	<u>124-40-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U093	<u>p-Dimethylaminoazobenzene</u>	<u>p-Dimethylaminoazobenzene</u>	<u>60-11-7</u>	<u>0.13</u>	<u>CMBST</u>
U094	<u>7,12-Dimethylbenz(a)anthracene</u>	<u>7,12-Dimethylbenz(a)anthracene</u>	<u>57-97-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U095	<u>3,3'-Dimethylbenzidine</u>	<u>3,3'-Dimethylbenzidine</u>	<u>119-93-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U096	<u>alpha, alpha-Dimethyl benzyl hydroperoxide</u>	<u>alpha, alpha-Dimethyl benzyl hydroperoxide</u>	<u>80-15-9</u>	<u>CHOXD; CHRED; CARBN; BIODG; OR CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U097	<u>Dimethylcarbamoyl chloride</u>	<u>Dimethylcarbamoyl chloride</u>	<u>79-44-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U098	<u>1,1-Dimethylhydrazine</u>	<u>1,1-Dimethylhydrazine</u>	<u>57-14-7</u>	<u>CHOXD; CHRED; CARBN; BIODG; OR CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U099	<u>1,2-Dimethylhydrazine</u>	<u>1,2-Dimethylhydrazine</u>	<u>540-73-8</u>	<u>CHOXD; CHRED; CARBN; BIODG; OR CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U101	<u>2,4-Dimethylphenol</u>	<u>2,4-Dimethylphenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>14</u>
U102	<u>Dimethyl phthalate</u>	<u>Dimethyl phthalate</u>	<u>131-11-3</u>	<u>0.047</u>	<u>28</u>
U103	<u>Dimethyl sulfate</u>	<u>Dimethyl sulfate</u>	<u>77-78-1</u>	<u>CHOXD; CHRED; CARBN; BIODG; OR CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U105	<u>2,4-Dinitrotoluene</u>	<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>0.32</u>	<u>140</u>
U106	<u>2,6-Dinitrotoluene</u>	<u>2,6-Dinitrotoluene</u>	<u>606-20-2</u>	<u>0.55</u>	<u>28</u>
U107	<u>Di-n-octyl phthalate</u>	<u>Di-n-octyl phthalate</u>	<u>117-84-0</u>	<u>0.017</u>	<u>28</u>
U108	<u>1,4-Dioxane</u>	<u>1,4-Dioxane</u>	<u>123-91-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
		<u>1,4-Dioxane; alternate⁶ standard for nonwastewaters only</u>	<u>123-91-1</u>	<u>12.0</u>	<u>170</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U109	<u>1,2-Diphenylhydrazine</u>	<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>CHOXD; CHRED; CARBN; BIODG; OR CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
		<u>1,2-Diphenylhydrazine; alternate⁶ standard for wastewaters only</u>	<u>122-66-7</u>	<u>0.087</u>	<u>NA</u>
U110	<u>Dipropylamine</u>	<u>Dipropylamine</u>	<u>142-84-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U111	<u>Di-n-propylNitrosamine</u>	<u>Di-n-propylNitrosamine</u>	<u>621-64-7</u>	<u>0.40</u>	<u>14</u>
U112	<u>Ethyl acetate</u>	<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>0.34</u>	<u>33</u>
U113	<u>Ethyl acrylate</u>	<u>Ethyl acrylate</u>	<u>140-88-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U114	<u>Ethylenebisdithiocarbamic acid salts and esters</u>	<u>Ethylenebisdithiocarbamic acid</u>	<u>111-54-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U115	<u>Ethylene oxide</u>	<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CHOXD; or CMBST</u>
		<u>Ethylene oxide; alternate⁶ standard for wastewaters only</u>	<u>75-21-8</u>	<u>0.12</u>	<u>NA</u>
U116	<u>Ethylene thiourea</u>	<u>Ethylene thiourea</u>	<u>96-45-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U117	<u>Ethyl ether</u>	<u>Ethyl ether</u>	<u>60-29-7</u>	<u>0.12</u>	<u>160</u>
U118	<u>Ethyl methacrylate</u>	<u>Ethyl methacrylate</u>	<u>97-63-2</u>	<u>0.14</u>	<u>160</u>
U119	<u>Ethyl methane sulfonate</u>	<u>Ethyl methane sulfonate</u>	<u>62-50-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U120	<u>Fluoranthene</u>	<u>Fluoranthene</u>	<u>206-44-0</u>	<u>0.068</u>	<u>3.4</u>
U121	<u>Trichloromonofluoromethane</u>	<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>0.020</u>	<u>30</u>
U122	<u>Formaldehyde</u>	<u>Formaldehyde</u>	<u>50-00-0</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U123	<u>Formic acid</u>	<u>Formic acid</u>	<u>64-18-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U124	<u>Furan</u>	<u>Furan</u>	<u>110-00-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U125	<u>Furfural</u>	<u>Furfural</u>	<u>98-01-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U126	<u>Glycidylaldehyde</u>	<u>Glycidylaldehyde</u>	<u>765-34-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U127	<u>Hexachlorobenzene</u>	<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>
U128	<u>Hexachlorobutadiene</u>	<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>0.055</u>	<u>5.6</u>
U129	<u>Lindane</u>	<u>alpha-BHC</u>	<u>319-84-6</u>	<u>0.00014</u>	<u>0.066</u>
		<u>beta-BHC</u>	<u>319-85-7</u>	<u>0.00014</u>	<u>0.066</u>
		<u>delta-BHC</u>	<u>319-86-8</u>	<u>0.023</u>	<u>0.066</u>
		<u>gamma-BHC (Lindane)</u>	<u>58-89-9</u>	<u>0.0017</u>	<u>0.066</u>
U130	<u>Hexachlorocyclopentadiene</u>	<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
U131	<u>Hexachloroethane</u>	<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
U132	<u>Hexachlorophene</u>	<u>Hexachlorophene</u>	<u>70-30-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U133	<u>Hydrazine</u>	<u>Hydrazine</u>	<u>302-01-2</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U134	<u>Hydrogen fluoride</u>	<u>Fluoride (measured in wastewaters only)</u>	<u>7664-39-3</u>	<u>35</u>	<u>ADGAS fb NEUTR; or NEUTR</u>
U135	<u>Hydrogen Sulfide</u>	<u>Hydrogen Sulfide</u>	<u>7783-06-4</u>	<u>CHOXD; CHRED; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
U136	<u>Cacodylic acid</u>	<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
U137	<u>Indeno(1,2,3-cd)pyrene</u>	<u>Indeno(1,2,3-cd)pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
U138	<u>Iodomethane</u>	<u>Iodomethane</u>	<u>74-88-4</u>	<u>0.19</u>	<u>65</u>
U140	<u>Isobutyl alcohol</u>	<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>5.6</u>	<u>170</u>
U141	<u>Isosafrole</u>	<u>Isosafrole</u>	<u>120-58-1</u>	<u>0.081</u>	<u>2.6</u>
U142	<u>Kepon</u>	<u>Kepon</u>	<u>143-50-8</u>	<u>0.0011</u>	<u>0.13</u>
U143	<u>Lasiocarpine</u>	<u>Lasiocarpine</u>	<u>303-34-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
U144	<u>Lead acetate</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
U145	<u>Lead phosphate</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
U146	<u>Lead subacetate</u>	<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
U147	Maleic anhydride	Maleic anhydride	108-31-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U148	Maleic hydrazide	Maleic hydrazide	123-33-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U149	Malononitrile	Malononitrile	109-77-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U150	Melphalan	Melphalan	148-82-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U151	U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All U151 (mercury) wastewaters.	Mercury	7439-97-6	0.15	NA
	Elemental mercury contaminated with radioactive materials.	Mercury	7439-97-6	NA	AMLGM
U152	Methacrylonitrile	Methacrylonitrile	126-98-7	0.24	84
U153	Methanethiol	Methanethiol	74-93-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U154	Methanol	Methanol	67-56-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Methanol, alternate ⁶ set of standards for both wastewaters and nonwastewaters	67-56-1	5.6	0.75 mg/l TCLP
U155	Methapyrilene	Methapyrilene	91-80-5	0.081	1.5
U156	Methyl chlorocarbonate	Methyl chlorocarbonate	79-22-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U157	3-Methylcholanthrene	3-Methylcholanthrene	56-49-5	0.0055	15
U158	4,4'-Methylene bis(2-chloroaniline)	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.50	30

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>U159</u>	<u>Methyl ethyl ketone</u>	<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
<u>U160</u>	<u>Methyl ethyl ketone peroxide</u>	<u>Methyl ethyl ketone peroxide</u>	<u>1338-23-4</u>	<u>CHOXD; CHRED; CARBN; BIODG; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
<u>U161</u>	<u>Methyl isobutyl ketone</u>	<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>0.14</u>	<u>33</u>
<u>U162</u>	<u>Methyl methacrylate</u>	<u>Methyl methacrylate</u>	<u>80-62-6</u>	<u>0.14</u>	<u>160</u>
<u>U163</u>	<u>N-Methyl N'-nitro N-nitrosoguanidine</u>	<u>N-Methyl N'-nitro N-nitrosoguanidine</u>	<u>70-25-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U164</u>	<u>Methylthiouracil</u>	<u>Methylthiouracil</u>	<u>56-04-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U165</u>	<u>Naphthalene</u>	<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
<u>U166</u>	<u>1,4-Naphthoquinone</u>	<u>1,4-Naphthoquinone</u>	<u>130-15-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U167</u>	<u>1-Naphthylamine</u>	<u>1-Naphthylamine</u>	<u>134-32-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U168</u>	<u>2-Naphthylamine</u>	<u>2-Naphthylamine</u>	<u>91-59-8</u>	<u>0.52</u>	<u>CMBST</u>
<u>U169</u>	<u>Nitrobenzene</u>	<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
<u>U170</u>	<u>p-Nitrophenol</u>	<u>p-Nitrophenol</u>	<u>100-02-7</u>	<u>0.12</u>	<u>29</u>
<u>U171</u>	<u>2-Nitropropane</u>	<u>2-Nitropropane</u>	<u>79-46-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U172</u>	<u>N-Nitrosodi-n-butylamine</u>	<u>N-Nitrosodi-n-butylamine</u>	<u>924-16-3</u>	<u>0.40</u>	<u>17</u>
<u>U173</u>	<u>N-Nitrosodiethanolamine</u>	<u>N-Nitrosodiethanolamine</u>	<u>1116-54-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U174</u>	<u>N-Nitrosodiethylamine</u>	<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>0.40</u>	<u>28</u>
<u>U176</u>	<u>N-Nitroso-N-ethylurea</u>	<u>N-Nitroso-N-ethylurea</u>	<u>759-73-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U177</u>	<u>N-Nitroso-N-methylurea</u>	<u>N-Nitroso-N-methylurea</u>	<u>684-93-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U178</u>	<u>N-Nitroso-N-methylurethane</u>	<u>N-Nitroso-N-methylurethane</u>	<u>615-53-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U179</u>	<u>N-Nitrosopiperidine</u>	<u>N-Nitrosopiperidine</u>	<u>100-75-4</u>	<u>0.013</u>	<u>35</u>
<u>U180</u>	<u>N-Nitrosopyrrolidine</u>	<u>N-Nitrosopyrrolidine</u>	<u>93-55-2</u>	<u>0.013</u>	<u>35</u>
<u>U181</u>	<u>5-Nitro-o-toluidine</u>	<u>5-Nitro-o-toluidine</u>	<u>99-55-8</u>	<u>0.32</u>	<u>28</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>U182</u>	<u>Paraldehyde</u>	<u>Paraldehyde</u>	<u>123-63-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U183</u>	<u>Pentachlorobenzene</u>	<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
<u>U184</u>	<u>Pentachloroethane</u>	<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
		<u>Pentachloroethane; alternate⁶ standards for both wastewaters and nonwastewaters</u>	<u>76-01-7</u>	<u>0.055</u>	<u>6.0</u>
<u>U185</u>	<u>Pentachloronitrobenzene</u>	<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>0.055</u>	<u>4.8</u>
<u>U186</u>	<u>1,3-Pentadiene</u>	<u>1,3-Pentadiene</u>	<u>504-60-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U187</u>	<u>Phenacetin</u>	<u>Phenacetin</u>	<u>62-44-2</u>	<u>0.081</u>	<u>16</u>
<u>U188</u>	<u>Phenol</u>	<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
<u>U189</u>	<u>Phosphorus sulfide</u>	<u>Phosphorus sulfide</u>	<u>1314-80-3</u>	<u>CHOXD; CHRED; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
<u>U190</u>	<u>Phthalic anhydride (measured as phthalic acid or terephthalic acid).</u>	<u>Phthalic anhydride (measured as phthalic acid or terephthalic acid)</u>	<u>100-21-0</u>	<u>0.055</u>	<u>28</u>
		<u>Phthalic anhydride</u>	<u>85-44-9</u>	<u>0.055</u>	<u>28</u>
<u>U191</u>	<u>2-Picoline</u>	<u>2-Picoline</u>	<u>109-06-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U192</u>	<u>Pronamide</u>	<u>Pronamide</u>	<u>23950-58-5</u>	<u>0.093</u>	<u>1.5</u>
<u>U193</u>	<u>1,3-Propane sultone</u>	<u>1,3-Propane sultone</u>	<u>1120-71-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U194</u>	<u>n-Propylamine</u>	<u>n-Propylamine</u>	<u>107-10-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U196</u>	<u>Pyridine</u>	<u>Pyridine</u>	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
<u>U197</u>	<u>p-Benzoquinone</u>	<u>p-Benzoquinone</u>	<u>106-51-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U200</u>	<u>Reserpine</u>	<u>Reserpine</u>	<u>50-55-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U201</u>	<u>Resorcinol</u>	<u>Resorcinol</u>	<u>108-46-3</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U203</u>	<u>Safrole</u>	<u>Safrole</u>	<u>94-59-7</u>	<u>0.081</u>	<u>22</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>U204</u>	<u>Selenium dioxide</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
<u>U205</u>	<u>Selenium sulfide</u>	<u>Selenium</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
<u>U206</u>	<u>Streptozotocin</u>	<u>Streptozotocin</u>	<u>18883-66-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U207</u>	<u>1,2,4,5-Tetrachlorobenzene</u>	<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
<u>U208</u>	<u>1,1,1,2-Tetrachloroethane</u>	<u>1,1,1,2-Tetrachloroethane</u>	<u>630-20-6</u>	<u>0.057</u>	<u>6.0</u>
<u>U209</u>	<u>1,1,2,2-Tetrachloroethane</u>	<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-5</u>	<u>0.057</u>	<u>6.0</u>
<u>U210</u>	<u>Tetrachloroethylene</u>	<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
<u>U211</u>	<u>Carbon tetrachloride</u>	<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
<u>U213</u>	<u>Tetrahydrofuran</u>	<u>Tetrahydrofuran</u>	<u>109-99-9</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U214</u>	<u>Thallium (I) acetate</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
<u>U215</u>	<u>Thallium (I) carbonate</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
<u>U216</u>	<u>Thallium (I) chloride</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
<u>U217</u>	<u>Thallium (I) nitrate</u>	<u>Thallium (measured in wastewaters only)</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>RTHRM; or STABL</u>
<u>U218</u>	<u>Thioacetamide</u>	<u>Thioacetamide</u>	<u>62-55-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U219</u>	<u>Thiourea</u>	<u>Thiourea</u>	<u>62-56-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U220</u>	<u>Toluene</u>	<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
<u>U221</u>	<u>Toluenediamine</u>	<u>Toluenediamine</u>	<u>25376-45-8</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
<u>U222</u>	<u>o-Toluidine hydrochloride</u>	<u>o-Toluidine hydrochloride</u>	<u>636-21-5</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U223</u>	<u>Toluene diisocyanate</u>	<u>Toluene diisocyanate</u>	<u>26471-62-5</u>	<u>CARBN; or CMBST</u>	<u>CMBST</u>
<u>U225</u>	<u>Bromoform (Tribromomethane)</u>	<u>Bromoform (Tribromomethane)</u>	<u>75-25-2</u>	<u>0.63</u>	<u>15</u>
<u>U226</u>	<u>1,1,1-Trichloroethane</u>	<u>1,1,1-Trichloroethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
<u>U227</u>	<u>1,1,2-Trichloroethane</u>	<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>U228</u>	<u>Trichloroethylene</u>	<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>
<u>U234</u>	<u>1,3,5-Trinitrobenzene</u>	<u>1,3,5-Trinitrobenzene</u>	<u>99-35-4</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U235</u>	<u>tris-(2,3-Dibromopropyl)-phosphate</u>	<u>tris-(2,3-Dibromopropyl)-phosphate</u>	<u>126-72-7</u>	<u>0.11</u>	<u>0.10</u>
<u>U236</u>	<u>Trypan Blue</u>	<u>Trypan Blue</u>	<u>72-57-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U237</u>	<u>Uracil mustard</u>	<u>Uracil mustard</u>	<u>66-75-1</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U238</u>	<u>Urethane (Ethyl carbamate)</u>	<u>Urethane (Ethyl carbamate)</u>	<u>51-79-6</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U239</u>	<u>Xylenes</u>	<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>
<u>U240</u>	<u>2,4-D (2,4-Dichlorophenoxyacetic acid)</u>	<u>2,4-D (2,4-Dichlorophenoxyacetic acid)</u>	<u>94-75-7</u>	<u>0.72</u>	<u>10</u>
	<u>2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters</u>		<u>NA</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U243</u>	<u>Hexachloropropylene</u>	<u>Hexachloropropylene</u>	<u>1888-71-7</u>	<u>0.035</u>	<u>30</u>
<u>U244</u>	<u>Thiram</u>	<u>Thiram</u>	<u>137-26-8</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U246</u>	<u>Cyanogen bromide</u>	<u>Cyanogen bromide</u>	<u>506-68-3</u>	<u>CHOXD; WETOX; or CMBST</u>	<u>CHOXD; WETOX; or CMBST</u>
<u>U247</u>	<u>Methoxychlor</u>	<u>Methoxychlor</u>	<u>72-43-5</u>	<u>0.25</u>	<u>0.18</u>
<u>U248</u>	<u>Warfarin, and salts, when present at concentrations of 0.3% or less.</u>	<u>Warfarin</u>	<u>81-81-2</u>	<u>(WETOX or CHOXD) fb CARBN; or CMBST</u>	<u>CMBST</u>
<u>U249</u>	<u>Zinc phosphide, Zn₃P₂, when present at concentrations of 10% or less.</u>	<u>Zinc Phosphide</u>	<u>1314-84-7</u>	<u>CHOXD; CHRED; or CMBST</u>	<u>CHOXD; CHRED; or CMBST</u>
<u>U271</u>	<u>Benomy¹⁰</u>	<u>Benomyl</u>	<u>17804-35-2</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U278</u>	<u>Bendiocarb¹⁰</u>	<u>Bendiocarb</u>	<u>22781-23-3</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U279</u>	<u>Carbaryl¹⁰</u>	<u>Carbaryl</u>	<u>63-25-2</u>	<u>0.006; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>0.14; or CMBST</u>

TREATMENT STANDARDS FOR HAZARDOUS WASTES

<u>Waste Code</u>	<u>Waste Description and Treatment/Regulatory Subcategory¹</u>	<u>Regulated Hazardous Constituent</u>		<u>Wastewaters</u>	<u>Nonwastewaters</u>
		<u>Common Name</u>	<u>CAS²No.</u>	<u>Concentration³ mg/l; or Technology Code⁴</u>	<u>Concentration⁵ in mg/kg unless noted as "mg/l TCLP"; or Technology Code</u>
<u>U280</u>	<u>Barban¹⁰</u>	<u>Barban</u>	<u>101-27-9</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U328</u>	<u>o-Toluidine</u>	<u>o-Toluidine</u>	<u>95-53-4</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN</u>	<u>CMBST</u>
<u>U353</u>	<u>p-Toluidine</u>	<u>p-Toluidine</u>	<u>106-49-0</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN</u>	<u>CMBST</u>
<u>U359</u>	<u>2-Ethoxyethanol</u>	<u>2-Ethoxyethanol</u>	<u>110-80-5</u>	<u>CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN</u>	<u>CMBST</u>
<u>U364</u>	<u>Bendiocarb phenol¹⁰</u>	<u>Bendiocarb phenol</u>	<u>22961-82-6</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U367</u>	<u>Carbofuran phenol¹⁰</u>	<u>Carbofuran phenol</u>	<u>1563-38-8</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U372</u>	<u>Carbendazim¹⁰</u>	<u>Carbendazim</u>	<u>10605-21-7</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U373</u>	<u>Propham¹⁰</u>	<u>Propham</u>	<u>122-42-9</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U387</u>	<u>Prosulfocarb¹⁰</u>	<u>Prosulfocarb</u>	<u>52888-80-9</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U389</u>	<u>Triallate¹⁰</u>	<u>Triallate</u>	<u>2303-17-5</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U394</u>	<u>A2213¹⁰</u>	<u>A2213</u>	<u>30558-43-1</u>	<u>0.042; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U395</u>	<u>Diethylene glycol, dicarbamate¹⁰</u>	<u>Diethylene glycol, dicarbamate</u>	<u>5952-26-1</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U404</u>	<u>Triethylamine¹⁰</u>	<u>Triethylamine</u>	<u>121-44-8</u>	<u>0.081; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.5; or CMBST</u>
<u>U409</u>	<u>Thiophanate-methyl¹⁰</u>	<u>Thiophanate-methyl</u>	<u>23564-05-8</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U410</u>	<u>Thiodicarb¹⁰</u>	<u>Thiodicarb</u>	<u>59669-26-0</u>	<u>0.019; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>
<u>U411</u>	<u>Propoxur¹⁰</u>	<u>Propoxur</u>	<u>114-26-1</u>	<u>0.056; or CMBST, CHOXD, BIODG, or CARBN</u>	<u>1.4; or CMBST</u>

Notes to Table:

1. The waste descriptions provided in this table do not replace waste descriptions in chapter 33.1-24-02. Descriptions of treatment/regulatory subcategories are provided, as needed, to distinguish between applicability of different standards.
2. CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.
3. Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.
4. All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in section 33.1-24-05-282 Table 1 - Technology Codes and Descriptions of Technology-Based Standards.
5. Except for metals (extraction procedure or toxicity characteristic leaching procedure) and cyanides (total and amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of sections 33.1-24-05-144 through 33.1-24-05-159 or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in subsection 4 of section 33.1-24-05-280. All concentration standards for nonwastewaters are based on analysis of grab samples.
6. Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the treatment/regulatory subcategory or physical form (for example, wastewater and/or nonwastewater) specified for that alternate standard.
7. Both cyanides (total) and cyanides (amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Environmental Protection Agency publication SW-846, as incorporated by reference in section 33.1-24-01-05, with a sample size of 10 grams and a distillation time of one hour and fifteen minutes.
8. These wastes, when rendered nonhazardous and then subsequently managed in Clean Water Act, or Clean Water Act-equivalent systems, are not subject to treatment standards. (See subdivisions c and d of subsection 3 of section 33.1-24-05-250.)
9. These wastes, when rendered nonhazardous and then subsequently injected in a class I Safe Drinking Water Act well are not subject to treatment standards. (See 40 CFR section 148.1(d).)
10. The treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST in table 1 in section 33.1-24-05-282, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined by the technology code CMBST in table 1 of section 33.1-24-05-282, for wastewaters.
11. For these wastes, the definition of CMBST is limited to: (1) combustion units operating under sections 33.1-24-05-201 through 33.1-24-05-249, (2) combustion units permitted under sections 33.1-24-05-144 through 33.1-24-05-159, or (3) combustion units operating under the applicable standards of subsection 5 of section 33.1-24-06-16, which have obtained a determination of equivalent treatment under subsection 2 of section 33.1-24-05-282.
12. Disposal of K175 wastes that have complied with all applicable section 33.1-24-05-280 treatment standards must also be macroencapsulated in accordance with section 33.1-24-05-285 table 1 unless the waste is placed in: (1) A monofill regulated under article 33.1-20 containing only K175 wastes that meet all applicable section 33.1-24-05-280 treatment standards; or (2) A dedicated landfill cell regulated under article 33.1-20 in which all other wastes being co-disposed are at pH 6.0 or less.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-281. Treatment standards expressed as concentrations in waste extract.

For the requirements previously found in this section and for treatment standards in table CCWE-Constituent Concentrations in Waste Extracts, refer to section 33.1-24-05-280.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-282. Treatment standards expressed as specified technologies.

NOTE: For the requirements previously found in this section in Table 2 - Technology-Based Standards By Resource Conservation Recovery Act Waste Code, and Table 3 - Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to section 33.1-24-05-280.

1. The following wastes in the table in section 33.1-24-05-280 "Treatment Standards for Hazardous Wastes", for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in the table entitled "Technology Codes and Description of Technology-Based Standards" in this section.

Table 1. Technology Codes and Description of Technology-Based Standards

<u>Technology Code</u>	<u>Description of Technology-Based Standards</u>
<u>ADGAS:</u>	<u>Venting of compressed gases into an absorbing or reacting media (for example, solid or liquid)-venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation.</u>
<u>AMLGM:</u>	<u>Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.</u>
<u>BIODG:</u>	<u>Biodegradation of organics or non-metallic inorganics (for example, degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues).</u>
<u>CARBN:</u>	<u>Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (for example, Total Organic Carbon can often be used as</u>

Table 1. Technology Codes and Description of Technology-Based Standards

<u>Technology Code</u>	<u>Description of Technology-Based Standards</u>
	<u>an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs.</u>
<u>CHOXD:</u>	<u>Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) Hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.</u>
<u>CHRED:</u>	<u>Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (for example, NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.</u>
<u>CMBST:</u>	<u>High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of sections 33.1-24-05-144 through 33.1-24-05-159, sections 33.1-24-05-525 through 33.1-24-05-549, or subsection 5 of section 33.1-24-06-16, and in other units operated in accordance with applicable technical operating requirements; and certain noncombustive technologies, such as the catalytic extraction process.</u>
<u>DEACT:</u>	<u>Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.</u>
<u>FSUBS:</u>	<u>Fuel substitution in units operated in accordance with applicable technical operating requirements.</u>
<u>HLVIT:</u>	<u>Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.</u>

Table 1. Technology Codes and Description of Technology-Based Standards

<u>Technology Code</u>	<u>Description of Technology-Based Standards</u>
<u>IMERC:</u>	<u>Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of sections 33.1-24-05-144 through 33.1-24-05-159. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (for example, High or Low Mercury Subcategories).</u>
<u>INCIN:</u>	<u>Incineration in units operated in accordance with the technical operating requirements of sections 33.1-24-05-144 through 33.1-24-05-159.</u>
<u>LLEXT:</u>	<u>Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.</u>
<u>MACRO:</u>	<u>Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to section 33.1-24-01-04.</u>
<u>NEUTR:</u>	<u>Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.</u>
<u>NLDBR:</u>	<u>No land disposal based on recycling.</u>
<u>POLYM:</u>	<u>Formation of complex high-molecular weight solids through polymerization of monomers in high-total organic carbon D001 nonwastewaters which are chemical components in the manufacture of plastics.</u>
<u>PRECP:</u>	<u>Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (for example, containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (for example, sodium and/or potassium hydroxides; (3) soda ash (for example, sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.</u>
<u>RBERY:</u>	<u>Thermal recovery of Beryllium.</u>

Table 1. Technology Codes and Description of Technology-Based Standards

<u>Technology Code</u>	<u>Description of Technology-Based Standards</u>
<u>RCGAS:</u>	<u>Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.</u>
<u>RCORR:</u>	<u>Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (for example, thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid - Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.</u>
<u>RLEAD:</u>	<u>Thermal recovery of lead in secondary lead smelters.</u>
<u>RMERC:</u>	<u>Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (for example, High or Low Mercury Subcategories).</u>
<u>RMETL:</u>	<u>Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (for example, zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (for example, crystallization) - Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.</u>
<u>RORGS:</u>	<u>Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystallization (including freeze crystallization); or (8) chemical phase separation techniques (for example, addition of acids, bases, demulsifiers, or similar chemicals) - Note: This does not preclude the use of other physical phase separation techniques such as</u>

Table 1. Technology Codes and Description of Technology-Based Standards

<u>Technology Code</u>	<u>Description of Technology-Based Standards</u>
	<u>a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.</u>
<u>RTHRM:</u>	<u>Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to subdivisions a, f, g, k, and l of subsection 45 of section 33.1-24-01-04 under the definition of "industrial furnaces".</u>
<u>RZINC:</u>	<u>Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.</u>
<u>STABL:</u>	<u>Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (for example, fly ash and cement kiln dust) - this does not preclude the addition of reagents (for example, iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.</u>
<u>SSTRP:</u>	<u>Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as temperature and pressure ranges, have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit, such as the number of separation stages and the internal column design, thus resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.</u>
<u>WETOX:</u>	<u>Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues).</u>
<u>WTRRX:</u>	<u>Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.</u>

Note 1: When a combination of these technologies (for example, a treatment train) is specified as a single treatment standard, the order of application is specified in section 33.1-24-05-282, table 2 by indicating the five letter technology code that must be applied first, then the designation "fb" (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

Note 2: When more than one technology (or treatment train) are specified as alternative treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon(;) with the last technology preceded by the word "or". This

indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

2. Any person may submit an application to the administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in subsections 1, 3, and 4 for wastes or specified in table 1 of section 33.1-24-05-285 for hazardous debris. The applicant must submit information demonstrating that the applicant's treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the administrator may approve the use of the alternative treatment method if the administrator finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in subsections 1, 3, and 4 for wastes or in table 1 of section 33.1-24-05-285 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

3. As an alternative to the otherwise applicable sections 33.1-24-05-280 through 33.1-24-05-289 treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

- a. The lab packs comply with the applicable provisions of section 33.1-24-05-185;
- b. The lab pack does not contain any of the wastes listed in appendix VIII of chapter 33.1-24-05;
- c. The lab packs are incinerated in accordance with the requirements of sections 33.1-24-05-144 through 33.1-24-05-159; and
- d. Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in sections 33.1-24-05-280 through 33.1-24-05-289.

4. Radioactive hazardous mixed wastes are subject to the treatment standards in section 33.1-24-05-280. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by environmental protection agency/state waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in section 33.1-24-05-285.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-283. Treatment standards expressed as waste concentrations.

For the requirements previously found in this section and for treatments standards in table CCW - Constituent Concentrations in Wastes, refer to section 33.1-24-05-280.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-284. Variance from a treatment standard.

1. Based on a petition filed by a generator or treater of hazardous waste, the administrator may approve a variance from an applicable treatment standard if:
 - a. It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or
 - b. It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:
 - (1) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); or
 - (2) For remediation waste only, treatment to the specified level, or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.
2. Each petition must be submitted in accordance with the procedures in section 33.1-24-01-06.
3. These petitions must include the following statement signed by the petitioner or an authorized representative: (I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.)
4. After receiving a petition for variance from a treatment standard, the administrator may request any additional information or samples which the administrator may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and to the environmental protection agency regional offices.
5. The administrator will give public notice in the federal register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard will be published in the federal register.
6. A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards shall comply with the waste analysis requirements for restricted wastes found under section 33.1-24-05-256.

7. During the petition review process, an applicant is required to comply with all restrictions on land disposal under sections 33.1-24-05-250 through 33.1-24-05-299 once the effective date for the waste has been reached.

8. Based on a petition filed by a generator or treater of hazardous waste, the administrator, or the administrator's delegated representative, may approve a site-specific variance from an applicable treatment standard if:

a. It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

b. It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(1) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media when the treatment standard is not based on combustion of such media); or

(2) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

c. For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (for example, lower than) the concentrations necessary to minimize short- and long-term threats to human health and the environment. Treatment variances approved under this subsection must:

(1) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:

(a) For carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from 10^{-4} to 10^{-6} ; and

(b) For constituents with noncarcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime.

(2) Not consider post-land-disposal controls.

d. For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (for example, lower than) natural background concentrations at the site where the contaminated soil will be land disposed.

e. Public notice and reasonable opportunity for public comment must be provided before granting or denying a petition.

9. Each application for a site-specific variance from a treatment standard must include the information in subdivisions a through d of subsection 2 of section 33.1-24-01-06.

10. After receiving an application for a site-specific variance from a treatment standard, the assistant administrator, or a delegated representative, may request any additional information or samples which may be required to evaluate the application.

11. A generator, treatment facility, or disposal facility that is managing a waste governed by a site-specific variance from a treatment standard must comply with the waste analysis requirements for restricted wastes found under section 33.1-24-05-256.

12. During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under sections 33.1-24-05-250 through 33.1-24-05-299 once the effective date for the waste has been reached.

13. For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, the environmental protection agency may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to sections 33.1-24-05-201 through 33.1-24-05-209.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-285. Treatment standards for hazardous debris.

1. **Treatment standards.** Hazardous debris must be treated prior to land disposal as follows unless the department determines under subdivision b of subsection 5 of section 33.1-24-02-03 that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in sections 33.1-24-05-280 through 33.1-24-05-289 for the waste contaminating the debris.

a. **General.** Hazardous debris must be treated for each "contaminant subject to treatment" defined by subsection 2 using the technology or technologies identified in table 1 of this section.

b. **Characteristic debris.** Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under sections 33.1-24-02-11, 33.1-24-02-12, and 33.1-24-02-13, respectively, must be deactivated by treatment using one of the technologies identified in table 1 of this section.

c. **Mixtures of debris types.** The treatment standards of table 1 in this section must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

d. **Mixtures of contaminant types.** Debris that is contaminated with two or more contaminants subject to treatment identified under subsection 2 must be treated for

each contaminant using one or more treatment technologies identified in table 1 of this section. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

e. Waste polychlorinated biphenyls. Hazardous debris that is also a waste polychlorinated biphenyl under 40 CFR part 761 is subject to the requirements of either 40 CFR part 761 or the requirements of this section, whichever are more stringent.

2. Contaminants subject to treatment. Hazardous debris must be treated for each "contaminant subject to treatment". The contaminants subject to treatment must be determined as follows:

a. Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the toxicity characteristic (TC) by section 33.1-24-02-14 are those extraction procedure constituents (hazardous waste numbers D004 through D017) for which the debris exhibits the toxicity characteristic.

b. Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for waste under section 33.1-24-05-280.

c. Cyanide reactive debris. Hazardous debris that is reactive because of cyanide must be treated for cyanide.

3. Conditioned exclusion of treated debris. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in table 1 of this section and that does not exhibit a characteristic of hazardous waste identified under sections 33.1-24-02-10 through 33.1-24-02-14 after treatment is not a hazardous waste and need not be managed in a hazardous waste facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in table 1 is a hazardous waste and must be managed in a hazardous waste facility.

4. Treatment residuals.

a. General requirements. Except as provided by subdivisions b and d:

(1) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and

(2) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by sections 33.1-24-05-280 through 33.1-24-05-289 for the waste contaminating the debris.

b. Nontoxic debris. Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by subsection 2, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of sections 33.1-24-05-280 through 33.1-24-05-289.

- c. Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 in "treatment standards for hazardous wastes" at section 33.1-24-05-280.
- d. Ignitable nonwastewater residue. Ignitable nonwastewater residue containing equal to or greater than ten percent total organic carbon is subject to the technology specified in the treatment standard for D001: ignitable liquids.
- e. Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this section.

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>A. Extraction Technologies:</u>		
<u>1. Physical Extraction</u>		
<u>a. Abrasive Blasting: Removal of contaminated debris surface layers using water and/or air pressure to propel a solid media (for example, steel shot, aluminum oxide grit, plastic beads).</u>	<u>Glass, Metal, Plastic, Rubber: Treatment to a clean debris surface.³</u> <u>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface.³</u>	<u>All Debris: None.</u>
<u>b. Scarification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.</u>	<u>Same as above.</u>	<u>Same as above.</u>
<u>c. Spalling: Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.</u>	<u>Same as above.</u>	<u>Same as above.</u>
<u>d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.⁴</u>	<u>Same as above.</u>	<u>Same as above.</u>

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.</u>	<u>Same as above.</u>	<u>Same as above.</u>
<u>2. Chemical Extraction</u>		
<u>a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers.</u>	<u>All Debris: Treatment to a clean debris surface³; Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit,⁵ except that this thickness limit may be waived under an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282;⁸ debris surfaces must be in contact with water solution for at least 15 minutes.</u>	<u>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion; if debris is contaminated with a dioxin-listed waste,⁶ and "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282 must be obtained.⁸</u>
<u>b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.⁴</u>	<u>Same as above.</u>	<u>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.</u>
<u>c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris</u>	<u>Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces must be in contact with the organic</u>	<u>Same as above.</u>

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.⁴</u>	<u>vapor for at least 60 minutes.</u>	
<u>3. Thermal Extraction</u>		
<u>a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, and/or carbon in a smelting, melting, or refining furnace to separate metals from debris.</u>	<u>For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</u>	<u>Debris contaminated with a dioxin-listed waste:⁵ Obtain an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282.⁸</u>
<u>b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.⁷</u>	<u>All Debris: Obtain an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282;⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</u>	<u>All Debris: Metals other than mercury.</u>
	<u>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval.</u>	

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>B. Destruction Technologies:</u>		
<u>1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegradation of organic or nonmetallic inorganic compounds (for example, inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.</u>	<u>All Debris: Obtain an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282;⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</u>	<u>All Debris: Metal contaminants.</u>
	<u>Brick, Cloth, Concrete, Paper, Pavement, Rock, wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval.</u>	
<u>2. Chemical Destruction</u>		
<u>a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents-(1) hypochlorite (for example, bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent destruction efficiency.⁴ Chemical oxidation specifically</u>	<u>All Debris: Obtain an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282;⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the</u>	<u>All Debris: Metal contaminants.</u>

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>includes what is referred to as alkaline chlorination.</u>	<u>waste contaminating the debris.</u>	
	<u>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval.</u>	
<u>b. Chemical Reduction: Chemical reaction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and polyethylene glycols (for example, NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency.⁴</u>	<u>Save as above.</u>	<u>Same as above.</u>
<u>3. Thermal Destruction: Treatment in an incinerator operating in accordance with sections 33.1-24-05-144 through 33.1-24-05-159 or Subpart O of 40 CFR 265; a boiler or industrial furnace operating in accordance with sections 33.1-24-05-525 through 33.1-24-05-549, or other thermal treatment unit operated in accordance with sections 33.1-24-05-299 through 33.1-24-05-399, or Subpart P, Part 265 of the 40 CFR, but excluding for purposes of these debris treatment standards Thermal Desorption units.</u>	<u>Treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</u>	<u>Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste.⁶ Obtain an "Equivalent Technology" approval under subsection 2 of section 33.1-24-05-282,⁸ except that this requirement does not apply to vitrification.</u>
<u>C. Immobilization Technologies:</u>		
<u>1. Macroencapsulation: Application of surface coating materials such as</u>	<u>Encapsulating material must completely</u>	<u>None.</u>

Table 1. Alternative Treatment Standards for Hazardous Debris¹

<u>Technology Description</u>	<u>Performance and/or Design and Operating Standard</u>	<u>Contaminant Restrictions²</u>
<u>polymeric organics (for example, resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media.</u>	<u>encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).</u>	
<u>2. Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (for example, fly ash and cement kiln dust). Reagents (for example, iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents.⁵</u>	<u>Leachability of the hazardous contaminants must be reduced.</u>	<u>None.</u>
<u>3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant.</u>	<u>Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).</u>	<u>None.</u>

FOOTNOTE: ¹Hazardous debris must be treated by either these standards of the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

FOOTNOTE: ²Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from Article 33.1-24).

FOOTNOTE: ³"Clean debris surface" means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

FOOTNOTE: ⁴Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

FOOTNOTE: ⁵If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or other nondebris material.

FOOTNOTE: ⁶Dioxin-listed wastes are hazardous waste numbers F020, F021, F022, F023, F026, and F027.

FOOTNOTE: ⁷Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

FOOTNOTE: ⁸The demonstration "Equivalent Technology" under subsection 2 of section 33.1-24-05-282 must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

FOOTNOTE: ⁹Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a "clean debris surface" as defined in note 3 when separating treated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-286. Alternative treatment standards based on high temperatures metal recovery.

For the treatment standards previously found in this section, refer to section 33.1-24-05-280.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-287. [Reserved]

33.1-24-05-288. Universal treatment standards.

Table "Universal Treatment Standards" identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in subsection 10 of section 33.1-24-05-251, these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following table "Universal Treatment Standards".

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>I. Organic Constituents:</u>			
<u>Acenaphthene</u>	<u>83-32-9</u>	<u>0.059</u>	<u>3.4</u>
<u>Acenaphthylene</u>	<u>208-96-8</u>	<u>0.059</u>	<u>3.4</u>
<u>Acetone</u>	<u>67-64-1</u>	<u>0.28</u>	<u>160</u>
<u>Acetonitrile</u>	<u>75-05-8</u>	<u>5.6</u>	<u>38</u>
<u>Acetophenone</u>	<u>96-86-2</u>	<u>0.010</u>	<u>9.7</u>
<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>	<u>0.059</u>	<u>140</u>
<u>Acrolein</u>	<u>107-02-8</u>	<u>0.29</u>	<u>NA</u>
<u>Acrylamide</u>	<u>79-06-1</u>	<u>19</u>	<u>23</u>
<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>0.24</u>	<u>84</u>
<u>Aldrin</u>	<u>309-00-2</u>	<u>0.021</u>	<u>0.066</u>
<u>4-Aminobiphenyl</u>	<u>92-67-1</u>	<u>0.13</u>	<u>NA</u>
<u>Aniline</u>	<u>62-53-3</u>	<u>0.81</u>	<u>14</u>
<u>o-Anisidine (2-methoxyaniline)</u>	<u>90-04-0</u>	<u>0.010</u>	<u>0.66</u>
<u>Anthracene</u>	<u>120-12-7</u>	<u>0.059</u>	<u>3.4</u>
<u>Aramite</u>	<u>140-57-8</u>	<u>0.36</u>	<u>NA</u>
<u>alpha-BHC</u>	<u>319-85-7</u>	<u>0.00014</u>	<u>0.066</u>
<u>beta-BHC</u>	<u>319-84-7</u>	<u>0.00014</u>	<u>0.066</u>
<u>delta-BHC</u>	<u>319-86-8</u>	<u>0.023</u>	<u>0.066</u>
<u>gamma-BHC</u>	<u>58-89-9</u>	<u>0.0017</u>	<u>0.066</u>
<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>0.059</u>	<u>3.4</u>
<u>Benzal chloride</u>	<u>98-87-3</u>	<u>0.055</u>	<u>6.0</u>
<u>Benzene</u>	<u>71-43-2</u>	<u>0.14</u>	<u>10</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u>	<u>205-99-2</u>	<u>0.11</u>	<u>6.8</u>
<u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u>	<u>207-08-9</u>	<u>0.11</u>	<u>6.8</u>
<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>	<u>0.0055</u>	<u>1.8</u>
<u>Benzo(a)pyrene</u>	<u>50-32-8</u>	<u>0.061</u>	<u>3.4</u>
<u>Bromodichloromethane</u>	<u>75-27-4</u>	<u>0.35</u>	<u>15</u>
<u>Bromomethane/Methyl bromide</u>	<u>74-83-9</u>	<u>0.11</u>	<u>15</u>
<u>4-Bromophenyl phenyl ether</u>	<u>101-55-3</u>	<u>0.055</u>	<u>15</u>
<u>n-Butyl alcohol</u>	<u>71-36-3</u>	<u>5.6</u>	<u>2.6</u>
<u>Butyl benzyl phthalate</u>	<u>85-68-7</u>	<u>0.017</u>	<u>28</u>
<u>2-sec-Butyl-4,6-dinitrophenol/ Dinoseb</u>	<u>88-85-7</u>	<u>0.066</u>	<u>2.5</u>
<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>3.8</u>	<u>4.8 mg/l TCLP</u>
<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>0.057</u>	<u>6.0</u>
<u>Chlordane (alpha and gamma isomers)</u>	<u>57-74-9</u>	<u>0.0033</u>	<u>0.26</u>
<u>p-Chloroaniline</u>	<u>106-47-8</u>	<u>0.46</u>	<u>16</u>
<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>0.057</u>	<u>6.0</u>
<u>Chlorobenzilate</u>	<u>510-15-6</u>	<u>0.10</u>	<u>NA</u>
<u>2-Chloro-1,3-butadiene</u>	<u>126-99-8</u>	<u>0.057</u>	<u>0.28</u>
<u>Chlorodibromomethane</u>	<u>124-48-1</u>	<u>0.057</u>	<u>15</u>
<u>Chloroethane</u>	<u>75-00-3</u>	<u>0.27</u>	<u>6.0</u>
<u>bis(2-Chloroethoxy)methane</u>	<u>111-91-1</u>	<u>0.036</u>	<u>7.2</u>
<u>bis(2-Chloroethyl)ether</u>	<u>111-44-4</u>	<u>0.033</u>	<u>6.0</u>
<u>2-Chloroethyl vinyl ether</u>	<u>110-75-8</u>	<u>0.062</u>	<u>NA</u>
<u>Chloroform</u>	<u>67-66-3</u>	<u>0.046</u>	<u>6.0</u>
<u>bis(2-Chloroisopropyl)ether</u>	<u>39638-32-9</u>	<u>0.055</u>	<u>7.2</u>
<u>p-Chloro-m-cresol</u>	<u>59-50-7</u>	<u>0.018</u>	<u>14</u>
<u>Chloromethane/methyl chloride</u>	<u>74-87-3</u>	<u>0.19</u>	<u>30</u>
<u>2-Chloronaphthalene</u>	<u>91-58-7</u>	<u>0.055</u>	<u>5.6</u>
<u>2-Chlorophenol</u>	<u>95-57-8</u>	<u>0.044</u>	<u>5.7</u>
<u>3-Chloropropylene</u>	<u>107-05-1</u>	<u>0.036</u>	<u>30</u>
<u>Chrysene</u>	<u>218-01-9</u>	<u>0.059</u>	<u>3.4</u>
<u>p-Cresidine</u>	<u>120-71-8</u>	<u>0.010</u>	<u>0.66</u>
<u>o-Cresol</u>	<u>95-48-7</u>	<u>0.11</u>	<u>5.6</u>
<u>m-Cresol (difficult to distinguish from p-cresol)</u>	<u>108-39-4</u>	<u>0.77</u>	<u>5.6</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
p-Cresol (difficult to distinguish from m-cresol)	<u>106-44-5</u>	<u>0.77</u>	<u>5.6</u>
<u>Cyclohexanone</u>	<u>108-94-1</u>	<u>0.36</u>	<u>0.75 mg/l TCLP</u>
<u>o,p'-DD</u>	<u>53-19-0</u>	<u>0.023</u>	<u>0.087</u>
<u>p,p'-DDD</u>	<u>72-54-8</u>	<u>0.023</u>	<u>0.087</u>
<u>o,p'-DDE</u>	<u>3424-82-6</u>	<u>0.031</u>	<u>0.087</u>
<u>p,p'-DDE</u>	<u>72-55-9</u>	<u>0.031</u>	<u>0.087</u>
<u>o,p'-DDT</u>	<u>789-02-6</u>	<u>0.0039</u>	<u>0.087</u>
<u>p,p'-DDT</u>	<u>50-29-3</u>	<u>0.0039</u>	<u>0.087</u>
<u>Dibenz(a,h)anthracene</u>	<u>53-70-3</u>	<u>0.055</u>	<u>8.2</u>
<u>Dibenz(a,e)pyrene</u>	<u>192-65-4</u>	<u>0.061</u>	<u>NA</u>
<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>0.11</u>	<u>15</u>
<u>1,2-Dibromoethane/Ethylene dibromide</u>	<u>106-93-4</u>	<u>0.028</u>	<u>15</u>
<u>Dibromomethane</u>	<u>74-95-3</u>	<u>0.11</u>	<u>15</u>
<u>m-Dichlorobenzene</u>	<u>541-73-1</u>	<u>0.036</u>	<u>6.0</u>
<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>0.088</u>	<u>6.0</u>
<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>0.090</u>	<u>6.0</u>
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>0.23</u>	<u>7.2</u>
<u>1,1-Dichloroethane</u>	<u>75-34-3</u>	<u>0.059</u>	<u>6.0</u>
<u>1,2-Dichloroethane</u>	<u>107-06-2</u>	<u>0.21</u>	<u>6.0</u>
<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>0.025</u>	<u>6.0</u>
<u>trans-1,2-Dichloroethylene</u>	<u>156-60-5</u>	<u>0.054</u>	<u>30</u>
<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>0.044</u>	<u>14</u>
<u>2,6-Dichlorophenol</u>	<u>87-65-0</u>	<u>0.044</u>	<u>14</u>
<u>2,4-Dichlorophenoxyacetic acid/2,4-D</u>	<u>94-75-7</u>	<u>0.72</u>	<u>10</u>
<u>1,2-Dichloropropane</u>	<u>78-87-5</u>	<u>0.85</u>	<u>18</u>
<u>cis-1,3-Dichloropropylene</u>	<u>10061-01-5</u>	<u>0.036</u>	<u>18</u>
<u>trans-1,3-Dichloropropylene</u>	<u>10061-02-6</u>	<u>0.036</u>	<u>18</u>
<u>Dieldrin</u>	<u>60-57-1</u>	<u>0.017</u>	<u>0.13</u>
<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>0.20</u>	<u>28</u>
<u>p-Dimethylaminoazobenzene</u>	<u>60-11-7</u>	<u>0.13</u>	<u>NA</u>
<u>2,4-Dimethylaniline (2,4-xylydine)</u>	<u>95-68-1</u>	<u>0.010</u>	<u>0.66</u>
<u>2,4-Dimethyl phenol</u>	<u>105-67-9</u>	<u>0.036</u>	<u>14</u>
<u>Dimethyl phthalate</u>	<u>131-11-3</u>	<u>0.047</u>	<u>28</u>
<u>Di-n-butyl phthalate</u>	<u>84-74-2</u>	<u>0.057</u>	<u>28</u>
<u>1,4-Dinitrobenzene</u>	<u>100-25-4</u>	<u>0.32</u>	<u>2.3</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>4,6-Dinitro-o-cresol</u>	<u>534-52-1</u>	<u>0.28</u>	<u>160</u>
<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>0.12</u>	<u>160</u>
<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>0.32</u>	<u>140</u>
<u>2,6-Dinitrotoluene</u>	<u>606-20-2</u>	<u>0.55</u>	<u>28</u>
<u>Di-n-octyl phthalate</u>	<u>117-84-0</u>	<u>0.017</u>	<u>28</u>
<u>Di-n-propylnitrosamine</u>	<u>621-64-7</u>	<u>0.40</u>	<u>14</u>
<u>1,4-Dioxane</u>	<u>123-91-1</u>	<u>12.0</u>	<u>170</u>
<u>Diphenylamine (difficult to distinguish from diphenylnitrosamine)</u>	<u>122-39-4</u>	<u>0.92</u>	<u>13</u>
<u>Diphenylnitrosamine (difficult to distinguish from diphenylamine)</u>	<u>86-30-6</u>	<u>0.92</u>	<u>13</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>0.087</u>	<u>NA</u>
<u>Disulfoton</u>	<u>298-04-4</u>	<u>0.017</u>	<u>6.2</u>
<u>Endosulfan I</u>	<u>959-98-8</u>	<u>0.023</u>	<u>0.066</u>
<u>Endosulfan II</u>	<u>33213-65-9</u>	<u>0.029</u>	<u>0.13</u>
<u>Endosulfan sulfate</u>	<u>1031-07-8</u>	<u>0.029</u>	<u>0.13</u>
<u>Endrin</u>	<u>72-20-8</u>	<u>0.0028</u>	<u>0.13</u>
<u>Endrin aldehyde</u>	<u>7421-93-4</u>	<u>0.025</u>	<u>0.13</u>
<u>Ethyl acetate</u>	<u>141-78-6</u>	<u>0.34</u>	<u>33</u>
<u>Ethyl benzene</u>	<u>100-41-4</u>	<u>0.057</u>	<u>10</u>
<u>Ethyl cyanide/Propanenitrile</u>	<u>107-12-0</u>	<u>0.24</u>	<u>360</u>
<u>Ethyl ether</u>	<u>60-29-7</u>	<u>0.12</u>	<u>160</u>
<u>bis(2-Ethylhexyl)phthalate</u>	<u>117-81-7</u>	<u>0.28</u>	<u>28</u>
<u>Ethyl methacrylate</u>	<u>97-63-2</u>	<u>0.14</u>	<u>160</u>
<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>0.12</u>	<u>NA</u>
<u>Famphur</u>	<u>52-85-7</u>	<u>0.017</u>	<u>15</u>
<u>Fluoranthene</u>	<u>206-44-0</u>	<u>0.068</u>	<u>3.4</u>
<u>Fluorene</u>	<u>86-73-7</u>	<u>0.059</u>	<u>3.4</u>
<u>Heptachlor</u>	<u>76-44-8</u>	<u>0.0012</u>	<u>0.066</u>
<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>0.016</u>	<u>0.066</u>
<u>1,2,3,4,6,7,8-Heptachlorodibenzo- p-dioxin (1,2,3,4,6,7,8-HpCDD)</u>	<u>35822-46-9</u>	<u>0.000035</u>	<u>0.0025</u>
<u>1,2,3,4,6,7,8-Heptachlorodibenzo furan (1,2,3,4,6,7,8-HpCDF)</u>	<u>67562-39-4</u>	<u>0.000035</u>	<u>0.0025</u>
<u>1,2,3,4,7,8,9-Heptachloro dibenzofuran (1,2,3,4,7,8,9-HpCDF)</u>	<u>55673-89-7</u>	<u>0.000035</u>	<u>0.0025</u>
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>0.055</u>	<u>10</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>0.057</u>	<u>2.4</u>
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>0.055</u>	<u>30</u>
<u>Hexachloropropylene</u>	<u>1888-71-7</u>	<u>0.035</u>	<u>30</u>
<u>HxCDDs (All Hexachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>HxCDFs (All Hexachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>Indeno (1,2,3-c,d) pyrene</u>	<u>193-39-5</u>	<u>0.0055</u>	<u>3.4</u>
<u>Iodomethane</u>	<u>74-88-4</u>	<u>0.19</u>	<u>65</u>
<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>5.6</u>	<u>170</u>
<u>Isodrin</u>	<u>465-73-6</u>	<u>0.021</u>	<u>0.066</u>
<u>Isosafrole</u>	<u>120-58-1</u>	<u>0.081</u>	<u>2.6</u>
<u>Kepone</u>	<u>143-50-0</u>	<u>0.0011</u>	<u>0.13</u>
<u>Methacrylonitrile</u>	<u>126-98-7</u>	<u>0.24</u>	<u>84</u>
<u>Methanol</u>	<u>67-56-1</u>	<u>5.6</u>	<u>0.75 mg/l TCLP</u>
<u>Methapyrilene</u>	<u>91-80-5</u>	<u>0.081</u>	<u>1.5</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>0.25</u>	<u>0.18</u>
<u>Methyl ethyl ketone</u>	<u>78-93-3</u>	<u>0.28</u>	<u>36</u>
<u>Methyl isobutyl ketone</u>	<u>108-10-1</u>	<u>0.14</u>	<u>33</u>
<u>Methyl methacrylate</u>	<u>80-62-6</u>	<u>0.14</u>	<u>160</u>
<u>Methyl methansulfonate</u>	<u>66-27-3</u>	<u>0.018</u>	<u>NA</u>
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>0.014</u>	<u>4.6</u>
<u>3-Methylchloranthrene</u>	<u>56-49-5</u>	<u>0.0055</u>	<u>15</u>
<u>4,4-Methylene bis(2-chloroaniline)</u>	<u>101-14-4</u>	<u>0.50</u>	<u>30</u>
<u>Methylene chloride</u>	<u>75-09-2</u>	<u>0.089</u>	<u>30</u>
<u>Naphthalene</u>	<u>91-20-3</u>	<u>0.059</u>	<u>5.6</u>
<u>2-Naphthylamine</u>	<u>91-59-8</u>	<u>0.52</u>	<u>NA</u>
<u>o-Nitroaniline</u>	<u>88-74-4</u>	<u>0.27</u>	<u>14</u>
<u>p-Nitroaniline</u>	<u>100-01-6</u>	<u>0.028</u>	<u>28</u>
<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.068</u>	<u>14</u>
<u>5-Nitro-o-toluidine</u>	<u>99-55-8</u>	<u>0.32</u>	<u>28</u>
<u>o-Nitrophenol</u>	<u>88-75-5</u>	<u>0.028</u>	<u>13</u>
<u>p-Nitrophenol</u>	<u>100-02-7</u>	<u>0.12</u>	<u>29</u>
<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>0.40</u>	<u>28</u>
<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>	<u>0.40</u>	<u>2.3</u>
<u>N-Nitroso-di-n-butylamine</u>	<u>924-16-3</u>	<u>0.40</u>	<u>17</u>
<u>N-Nitrosomethylethylamine</u>	<u>10595-95-6</u>	<u>0.40</u>	<u>2.3</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>N-Nitrosomorpholine</u>	<u>59-89-2</u>	<u>0.40</u>	<u>2.3</u>
<u>N-Nitrosopiperidine</u>	<u>100-75-4</u>	<u>0.013</u>	<u>35</u>
<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>0.013</u>	<u>35</u>
<u>1,2,3,4,6,7,8,9-Octachlorodibenzo- p-dioxin (OCDD)</u>	<u>3268-87-9</u>	<u>0.000063</u>	<u>0.005</u>
<u>1,2,3,4,6,7,8,9-Octachlorodibenzo furan (OCDF)</u>	<u>39001-02-0</u>	<u>0.000063</u>	<u>0.005</u>
<u>Parathion</u>	<u>56-38-2</u>	<u>0.014</u>	<u>4.6</u>
<u>Total PCBs (sum of all PCB isomers, or all Aroclors)⁸</u>	<u>1336-36-3</u>	<u>0.10</u>	<u>10</u>
<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.055</u>	<u>10</u>
<u>PeCDDs (All Pentachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>PeCDFs (All Pentachlorodibenzo-furans)</u>	<u>NA</u>	<u>0.000035</u>	<u>0.001</u>
<u>Pentachloroethane</u>	<u>76-01-7</u>	<u>0.055</u>	<u>6.0</u>
<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>0.055</u>	<u>4.8</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>0.089</u>	<u>7.4</u>
<u>Phenacetin</u>	<u>62-44-2</u>	<u>0.081</u>	<u>16</u>
<u>Phenanthrene</u>	<u>85-01-8</u>	<u>0.059</u>	<u>5.6</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>0.039</u>	<u>6.2</u>
<u>1,3-Phenylenediamine</u>	<u>108-45-2</u>	<u>0.010</u>	<u>0.66</u>
<u>Phorate</u>	<u>298-02-2</u>	<u>0.021</u>	<u>4.6</u>
<u>Phthalic acid</u>	<u>100-21-0</u>	<u>0.055</u>	<u>28</u>
<u>Phthalic anhydride</u>	<u>85-44-9</u>	<u>0.055</u>	<u>28</u>
<u>Pronamide</u>	<u>23950-58-5</u>	<u>0.093</u>	<u>1.5</u>
<u>Pyrene</u>	<u>129-00-0</u>	<u>0.067</u>	<u>8.2</u>
<u>Pyridine</u>	<u>110-86-1</u>	<u>0.014</u>	<u>16</u>
<u>Safrole</u>	<u>94-59-7</u>	<u>0.081</u>	<u>22</u>
<u>Silvex/2,4,5-TP</u>	<u>93-72-1</u>	<u>0.72</u>	<u>7.9</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.055</u>	<u>14</u>
<u>TCDDs (All Tetrachlorodibenzo-p-dioxins)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>TCDFs (All Tetrachlorodibenzofurans)</u>	<u>NA</u>	<u>0.000063</u>	<u>0.001</u>
<u>1,1,1,2-Tetrachloroethane</u>	<u>630-20-6</u>	<u>0.057</u>	<u>6.0</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-5</u>	<u>0.057</u>	<u>6.0</u>
<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>0.056</u>	<u>6.0</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>0.030</u>	<u>7.4</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
<u>Toluene</u>	<u>108-88-3</u>	<u>0.080</u>	<u>10</u>
<u>Toxaphene</u>	<u>8001-35-2</u>	<u>0.0095</u>	<u>2.6</u>
<u>Tribromomethane/Bromoform</u>	<u>75-25-2</u>	<u>0.63</u>	<u>15</u>
<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>0.055</u>	<u>19</u>
<u>1,1,1-Trichlorethane</u>	<u>71-55-6</u>	<u>0.054</u>	<u>6.0</u>
<u>1,1,2-Trichlorethane</u>	<u>79-00-5</u>	<u>0.054</u>	<u>6.0</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>0.054</u>	<u>6.0</u>
<u>Trichlorofluoromethane</u>	<u>75-69-4</u>	<u>0.020</u>	<u>30</u>
<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>0.18</u>	<u>7.4</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>0.035</u>	<u>7.4</u>
<u>2,4,5-Trichlorophenoxyacetic acid/2,4,5-T</u>	<u>93-76-5</u>	<u>0.72</u>	<u>7.9</u>
<u>1,2,3-Trichloropropane</u>	<u>96-18-4</u>	<u>0.85</u>	<u>30</u>
<u>1,1,2-Trichloro-1,2,2-trifluoroethane</u>	<u>76-13-1</u>	<u>0.057</u>	<u>30</u>
<u>tris-(2,3-Dibromopropyl) phosphate</u>	<u>126-72-7</u>	<u>0.11</u>	<u>0.10</u>
<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>0.27</u>	<u>6.0</u>
<u>Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)</u>	<u>1330-20-7</u>	<u>0.32</u>	<u>30</u>

II. Inorganic Consitutents:

<u>Antimony</u>	<u>7440-36-0</u>	<u>1.9</u>	<u>1.15 mg/l TCLP</u>
<u>Arsenic</u>	<u>7440-38-2</u>	<u>1.4</u>	<u>5.0 mg/l TCLP</u>
<u>Barium</u>	<u>7440-39-3</u>	<u>1.2</u>	<u>21 mg/l TCLP</u>
<u>Beryllium</u>	<u>7440-41-7</u>	<u>0.82</u>	<u>1.22 mg/l TCLP</u>
<u>Cadmium</u>	<u>7440-43-9</u>	<u>0.69</u>	<u>0.11 mg/l TCLP</u>
<u>Chromium (Total)</u>	<u>7440-47-3</u>	<u>2.77</u>	<u>0.60 mg/l TCLP</u>
<u>Cyanides (Total)⁴</u>	<u>57-12-5</u>	<u>1.2</u>	<u>590</u>
<u>Cyanides (Amenable)⁴</u>	<u>57-12-5</u>	<u>0.86</u>	<u>30</u>
<u>Fluoride⁵</u>	<u>16984-48-8</u>	<u>35</u>	<u>NA</u>
<u>Lead</u>	<u>7439-92-1</u>	<u>0.69</u>	<u>0.75 mg/l TCLP</u>
<u>Mercury--Nonwastewater from Retort</u>	<u>7439-97-6</u>	<u>NA</u>	<u>0.20 mg/l TCLP</u>
<u>Mercury--All Others</u>	<u>7439-97-6</u>	<u>0.15</u>	<u>0.025 mg/l TCLP</u>
<u>Nickel</u>	<u>7440-02-0</u>	<u>3.98</u>	<u>11 mg/l TCLP</u>
<u>Selenium⁷</u>	<u>7782-49-2</u>	<u>0.82</u>	<u>5.7 mg/l TCLP</u>
<u>Silver</u>	<u>7440-22-4</u>	<u>0.43</u>	<u>0.14 mg/l TCLP</u>
<u>Sulfide⁵</u>	<u>18496-25-8</u>	<u>14</u>	<u>NA</u>
<u>Thallium</u>	<u>7440-28-0</u>	<u>1.4</u>	<u>0.20 mg/l TCLP</u>

Universal Treatment Standards

<u>Regulated Constituent/ Common Name</u>	<u>CAS¹ Number</u>	<u>Wastewater Standard Concentration² in mg/l</u>	<u>Nonwastewater Standard Concentration³ in mg/kg unless noted as "mg/l TCLP"</u>
Vanadium ⁵	7440-62-2	4.3	1.6 mg/l TCLP
Zinc ⁵	7440-66-6	2.61	4.3 mg/l TCLP

¹ CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.

² Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.

³ Except for Metals (Extraction procedure or toxicity characteristic leaching procedure) and cyanides (total and amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of sections 33.1-24-05-144 through 33.1-24-05-159, and the applicable requirements under subsection 5 of section 33.1-24-06-16, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in subsection 4 of section 33.1-24-05-280. All concentration standards for nonwastewaters are based on analysis of grab samples.

⁴ Both cyanides (total) and cyanides (amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05, with a sample size of 10 grams and a distillation time of one hour and fifteen minutes.

⁵ These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at subsection 10 of section 33.1-24-05-251.

⁶ [Reserved]

⁷ This constituent is not an underlying hazardous constituent as defined in subsection 10 of section 33.1-24-05-251 because its UTS level is greater than its toxicity characteristic level, thus a treated selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

⁸ This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004 through D011 only.

Note: NA means not applicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-289. Alternative land disposal restriction treatment standards for contaminated soil.

1. Applicability. The generator or treatment, storage, or disposal facility must comply with land disposal restrictions prior to placing soil that exhibits a characteristic of hazardous waste, or exhibited a characteristic of hazardous waste at the time soil that exhibits or exhibited a characteristic of hazardous waste was generated, into a land disposal unit. The following chart describes whether the generator or treatment, storage, or disposal facility must comply with land disposal restrictions prior to placing soil contaminated by listed hazardous waste into a land disposal unit:

	<u>And if land disposal restrictions</u>		
<u>If land disposal restrictions</u>		<u>And if</u>	<u>Then you</u>

<u>Applied to the listed waste when it contaminated the soil.</u>	<u>Apply to the listed waste now.</u>		<u>Must comply with the land disposal restrictions.</u>
<u>Did not apply to the listed waste when it contaminated the soil.</u>	<u>Apply to the listed waste now.</u>	<u>The soil is determined to contain a listed waste when the soil is first generated.</u>	<u>Must comply with the land disposal restrictions.</u>
<u>Did not apply to the listed waste when it contaminated the soil.</u>	<u>Apply to the listed waste now.</u>	<u>The soil is determined not to contain a listed waste when the soil is first generated.</u>	<u>Need not comply with the land disposal restrictions.</u>
<u>Did not apply to the listed waste when it contaminated the soil.</u>	<u>Do not apply to the listed waste now.</u>		<u>Need not comply with the land disposal restrictions.</u>

*For dates of land disposal restriction applicability, see appendix XI to chapter 33.1-24-05. To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill.

2. Prior to land disposal, contaminated soil identified by subsection 1 as needing to comply with land disposal restrictions must be treated according to the applicable treatment standards specified in subsection 3 or according to the universal treatment standards specified in section 33.1-24-05-288 applicable to the contaminating listed hazardous waste or the applicable characteristic of hazardous waste if the soil is characteristic, or both. The treatment standards specified in subsection 3 and the universal treatment standards may be modified through a treatment variance approved in accordance with section 33.1-24-05-284.

3. Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified by subsection 1 as needing to comply with land disposal restrictions must be treated according to all the standards specified in this subsection or according to the universal treatment standards specified in section 33.1-24-05-288.

a. All soils. Prior to land disposal, all constituents subject to treatment must be treated as follows:

(1) For nonmetals, except carbon disulfide, cyclohexanone, and methanol, treatment must achieve ninety percent reduction in total constituent concentrations, except as provided by paragraph 3.

(2) For metals and carbon disulfide, cyclohexanone, and methanol, treatment must achieve ninety percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the toxicity characteristic leaching procedure) or ninety percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by paragraph 3.

(3) When treatment of any constituent subject to treatment to a ninety percent reduction standard would result in a concentration less than ten times the universal treatment standard for that constituent, treatment to achieve constituent concentrations less than ten times the universal treatment standard is not required. Universal treatment standards are identified in table "universal treatment standards" in section 33.1-24-05-288.

b. Soils that exhibit the characteristic of ignitability, corrosivity, or reactivity. In addition to the treatment required by subdivision a, prior to land disposal, soils that exhibit

the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

c. Soils that contain nonanalyzable constituents. In addition to the treatment requirements of subdivisions a and b, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

(1) For soil that contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable constituents to the levels specified in subdivisions a and b; or

(2) For soil that contains only nonanalyzable constituents, treatment by the method or methods specified in section 33.1-24-05-282 for the waste contained in the soil.

4. Constituents subject to treatment. When applying the soil treatment standards in subsection 3, constituents subject to treatment are any constituents listed in section 33.1-24-05-288, table "universal treatment standards" that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, and zinc, and are present at concentrations greater than ten times the universal treatment standard. Polychlorinated biphenyls are not a constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

5. Management of treatment residuals. Treatment residuals from treating contaminated soil identified by subsection 1 as needing to comply with land disposal restrictions must be managed as follows:

a. Soil residuals are subject to the treatment standards of this section;

b. Nonsoil residuals are subject to:

(1) For soils contaminated by listed hazardous waste, the article 33.1-24 standards applicable to the listed hazardous waste; and

(2) For soils that exhibit a characteristic of hazardous waste, if the nonsoil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-290. Prohibitions on storage of restricted wastes.

1. Except as provided in this section, the storage of hazardous wastes restricted from land disposal under sections 33.1-24-05-266 through 33.1-24-05-279 is prohibited, unless the following conditions are met:

a. A generator stores such wastes in tanks, containers, or containment buildings onsite solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in section 33.1-24-03-12, chapter 33.1-24-05, and the applicable requirements of subsection 5 of section 33.1-24-06-16;

- b. An owner or operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and:
- (1) Each container is clearly marked to identify its contents and the date each period of accumulation begins; and
 - (2) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner or operator shall comply with the operating record requirements specified in section 33.1-24-05-40; and
- c. A transporter stores manifested shipments of such wastes at a transfer facility for ten days or less.
2. An owner or operator of a treatment, storage, or disposal facility may store such wastes for up to one year unless the department can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous wastes as are necessary to facilitate proper recovery, treatment, or disposal.
 3. An owner or operator of a treatment, storage, or disposal facility may store such wastes beyond one year; however, the owner or operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous wastes as are necessary to facilitate proper recovery, treatment, or disposal.
 4. If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste, for example, because of an approved case-by-case extension under section 33.1-24-05-254, or a national capacity variance under section sections 33.1-24-05-266 through 33.1-24-05-279, the prohibition in subsection 1 does not apply during the period of such exemption.
 5. The prohibition in subsection 1 does not apply to hazardous wastes that meet the treatment standard specified under sections 33.1-24-05-281, 33.1-24-05-282, and 33.1-24-05-283 or the treatment standard specified under the variance in section 33.1-24-05-284, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in section 33.1-24-04-272 or Resource Conservation and Recovery Act section 3004.
 6. Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to fifty parts per million must be stored at a facility that meets the requirements of 40 CFR 761.65(b) and must be removed from storage and treated or disposed as required under sections 33.1-24-05-250 through 33.1-24-05-299 within one year of the date when such wastes are first placed into storage. The provisions of subsection 3 do not apply to such polychlorinated biphenyls wastes prohibited under section 33.1-24-05-272.
 7. The prohibition and requirements in this section do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to section 33.1-24-05-554.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-291. [Reserved]

33.1-24-05-292. [Reserved]

33.1-24-05-293. [Reserved]

33.1-24-05-294. [Reserved]

33.1-24-05-295. [Reserved]

33.1-24-05-296. [Reserved]

33.1-24-05-297. [Reserved]

33.1-24-05-298. [Reserved]

33.1-24-05-299. [Reserved]

33.1-24-05-300. Applicability to miscellaneous units.

Sections 33.1-24-05-300 through 33.1-24-05-309 apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as section 33.1-24-05-01 provides otherwise.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-301. Environmental performance standards.

A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions must include those requirements of sections 33.1-24-05-89 through 33.1-24-05-190, sections 33.1-24-05-400 through 33.1-24-05-474, chapter 33.1-24-06, 40 CFR part 63, subpart EEE, and 40 CFR part 146 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

1. Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment, considering:
 - a. The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;
 - b. The hydrologic and geologic characteristics of the unit and the surrounding area;

- c. The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water;
 - d. The quantity and direction of ground water flow;
 - e. The proximity to and withdrawal rates of current and potential ground water users;
 - f. The patterns of land use in the region;
 - g. The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food chain crops and other vegetation;
 - h. The potential for health risks caused by human exposure to waste constituents; and
 - i. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
2. Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering:
- a. The volume and physical and chemical characteristics of the waste in the unit;
 - b. The effectiveness and reliability of containing, confining, and collecting systems in structures in preventing migration;
 - c. The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;
 - d. The patterns of precipitation in the region;
 - e. The quantity, quality, and direction of ground water flow;
 - f. The proximity of the unit to surface waters;
 - g. The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;
 - h. The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;
 - i. The patterns of land use in the region;
 - j. The potential for health risks caused by human exposure to waste constituents; and
 - k. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.
3. Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering:

- a. The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols, and particulate;
- b. The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
- c. The operating characteristics of the unit;
- d. The atmospheric, meteorologic, and topographic characteristics of the unit and the surrounding area;
- e. The existing quality of the air, including other sources of contamination and their cumulative impact on the air;
- f. The potential for health risks caused by human exposure to waste constituents; and
- g. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-302. Monitoring, analysis, inspection, response, reporting, and corrective action.

Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with sections 33.1-24-05-06, 33.1-24-05-17, 33.1-24-05-42, 33.1-24-05-43, 33.1-24-05-44, 33.1-24-05-58, and 33.1-24-05-301 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-303. Postclosure care.

A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with section 33.1-24-05-301 during the postclosure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of section 33.1-24-05-301 during postclosure care. The postclosure plan under section 33.1-24-05-67 must specify the requirements that will be used to satisfy this requirement.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-304. [Reserved]

33.1-24-05-305. [Reserved]

- 33.1-24-05-306. [Reserved]
- 33.1-24-05-307. [Reserved]
- 33.1-24-05-308. [Reserved]
- 33.1-24-05-309. [Reserved]
- 33.1-24-05-310. [Reserved]
- 33.1-24-05-311. [Reserved]
- 33.1-24-05-312. [Reserved]
- 33.1-24-05-313. [Reserved]
- 33.1-24-05-314. [Reserved]
- 33.1-24-05-315. [Reserved]
- 33.1-24-05-316. [Reserved]
- 33.1-24-05-317. [Reserved]
- 33.1-24-05-318. [Reserved]
- 33.1-24-05-319. [Reserved]
- 33.1-24-05-320. [Reserved]
- 33.1-24-05-321. [Reserved]
- 33.1-24-05-322. [Reserved]
- 33.1-24-05-323. [Reserved]
- 33.1-24-05-324. [Reserved]
- 33.1-24-05-325. [Reserved]
- 33.1-24-05-326. [Reserved]
- 33.1-24-05-327. [Reserved]
- 33.1-24-05-328. [Reserved]
- 33.1-24-05-329. [Reserved]
- 33.1-24-05-330. [Reserved]
- 33.1-24-05-331. [Reserved]
- 33.1-24-05-332. [Reserved]
- 33.1-24-05-333. [Reserved]
- 33.1-24-05-334. [Reserved]

- 33.1-24-05-335. [Reserved]
- 33.1-24-05-336. [Reserved]
- 33.1-24-05-337. [Reserved]
- 33.1-24-05-338. [Reserved]
- 33.1-24-05-339. [Reserved]
- 33.1-24-05-340. [Reserved]
- 33.1-24-05-341. [Reserved]
- 33.1-24-05-342. [Reserved]
- 33.1-24-05-343. [Reserved]
- 33.1-24-05-344. [Reserved]
- 33.1-24-05-345. [Reserved]
- 33.1-24-05-346. [Reserved]
- 33.1-24-05-347. [Reserved]
- 33.1-24-05-348. [Reserved]
- 33.1-24-05-349. [Reserved]
- 33.1-24-05-350. [Reserved]
- 33.1-24-05-351. [Reserved]
- 33.1-24-05-352. [Reserved]
- 33.1-24-05-353. [Reserved]
- 33.1-24-05-354. [Reserved]
- 33.1-24-05-355. [Reserved]
- 33.1-24-05-356. [Reserved]
- 33.1-24-05-357. [Reserved]
- 33.1-24-05-358. [Reserved]
- 33.1-24-05-359. [Reserved]
- 33.1-24-05-360. [Reserved]
- 33.1-24-05-361. [Reserved]
- 33.1-24-05-362. [Reserved]
- 33.1-24-05-363. [Reserved]

- 33.1-24-05-364. [Reserved]
- 33.1-24-05-365. [Reserved]
- 33.1-24-05-366. [Reserved]
- 33.1-24-05-367. [Reserved]
- 33.1-24-05-368. [Reserved]
- 33.1-24-05-369. [Reserved]
- 33.1-24-05-370. [Reserved]
- 33.1-24-05-371. [Reserved]
- 33.1-24-05-372. [Reserved]
- 33.1-24-05-373. [Reserved]
- 33.1-24-05-374. [Reserved]
- 33.1-24-05-375. [Reserved]
- 33.1-24-05-376. [Reserved]
- 33.1-24-05-377. [Reserved]
- 33.1-24-05-378. [Reserved]
- 33.1-24-05-379. [Reserved]
- 33.1-24-05-380. [Reserved]
- 33.1-24-05-381. [Reserved]
- 33.1-24-05-382. [Reserved]
- 33.1-24-05-383. [Reserved]
- 33.1-24-05-384. [Reserved]
- 33.1-24-05-385. [Reserved]
- 33.1-24-05-386. [Reserved]
- 33.1-24-05-387. [Reserved]
- 33.1-24-05-388. [Reserved]
- 33.1-24-05-389. [Reserved]
- 33.1-24-05-390. [Reserved]
- 33.1-24-05-391. [Reserved]
- 33.1-24-05-392. [Reserved]

33.1-24-05-393. [Reserved]

33.1-24-05-394. [Reserved]

33.1-24-05-395. [Reserved]

33.1-24-05-396. [Reserved]

33.1-24-05-397. [Reserved]

33.1-24-05-398. [Reserved]

33.1-24-05-399. [Reserved]

33.1-24-05-400. Applicability to air emission standards for process vents.

1. The regulations of sections 33.1-24-05-400 through 33.1-24-05-419 apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in section 33.1-24-05-01).
2. Except for subsections 4 and 5 of section 33.1-24-05-404, sections 33.1-24-05-400 through 33.1-24-05-419 apply to process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least ten parts per million weight, if these operations are conducted in one of the following:
 - a. A unit that is subject to the permitting requirements of chapter 33.1-24-06;
 - b. A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of subsection 1 of section 33.1-24-03-12 (for example, a hazardous waste recycling unit that is not a ninety-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 33.1-24-06; or
 - c. A unit that is exempt from permitting under the provisions of subsection 1 of section 33.1-24-03-12 (for example, a ninety-day tank or container) and is not a recycling unit under the provisions of section 33.1-24-02-06.
3. For the owner and operator of a facility subject to sections 33.1-24-05-400 through 33.1-24-05-419 and who received a final state-issued hazardous waste permit under article 33.1-24 prior to December 6, 1996, the requirements of section 33.1-24-05-400 through 33.1-24-05-419 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of section 33.1-24-07-11 or reviewed in accordance with the requirements of subsection 1 of section 33.1-24-06-06. Until such date when the owner and operator receive a final state-issued hazardous waste permit incorporating the requirements of sections 33.1-24-05-400 through 33.1-24-05-419, the owner and operator are subject to the applicable requirements of subsection 5 of section 33.1-24-06-16.

[Note: The requirements of sections 33.1-24-05-402 through 33.1-24-05-406 apply to process vents on hazardous waste recycling units previously exempt under subdivision a of subsection 3 of section 33.1-24-02-06. Other exemptions under section 33.1-24-02-04 and subsection 7 of section 33.1-24-05-01 are not affected by these requirements.]

4. [Reserved]

5. The requirements of sections 33.1-24-05-400 through 33.1-24-04-419 do not apply to the process vents at a facility where the facility owner or operator certifies that all of the process vents that would otherwise be subject to sections 33.1-24-05-400 through 33.1-24-05-419 are equipped with and operating air emission controls in accordance with the process vent requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, 61, or 63. The documentation of compliance under regulations at 40 CFR part 60, 61, or 63 shall be kept with, or made readily available with, the facility operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-401. Definitions.

As used in sections 33.1-24-05-400 through 33.1-24-05-419, all terms not defined herein have the meaning given in North Dakota Century Code chapter 23.1-04 and chapters 33.1-24-01 through 33.1-24-05 of this article.

1. "Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Pack towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.
2. "Bottoms receiver" means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.
3. "Closed-vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.
4. "Condenser" means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.
5. "Connector" means flange, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, "connector" means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.
6. "Continuous recorder" means a data-recording device recording an instantaneous data value at least once every fifteen minutes.
7. "Control device" means an enclosed combustion device vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvent or other organic for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.
8. "Control device shutdown" means the cessation of operation of a control device for any purpose.

9. "Distillate receiver" means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.
10. "Distillation operation" means an operation, either batch or continuous separating one or more feed streams into two or more exit streams, each exit stream having component concentrations different from those in the feed streams. The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.
11. "Double-block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.
12. "Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by sections 33.1-24-05-400 through 33.1-24-05-419.
13. "First attempt at repair" means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.
14. "Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.
15. "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.
16. "Fractionation operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.
17. "Hazardous waste management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than twenty-four hours is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.
18. "Hot well" means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.
19. "In gas or vapor service" means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.
20. "In heavy liquid service" means that the piece of equipment is not in gas or vapor service or in light liquid service.
21. "In light liquid service" means that the piece of equipment contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than three-tenths kilopascals at twenty degrees Celsius, the total concentration of the pure organic components having a vapor pressure greater than

three-tenths kilopascals at twenty degrees Celsius is equal to or greater than twenty percent by weight, and the fluid is a liquid at operating conditions.

22. "In situ sampling systems" means nonextractive samplers or inline samplers.
23. "In vacuum service" means that equipment is operating at an internal pressure that is at least five kilopascals below ambient pressure.
24. "Malfunction" means any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.
25. "Open-ended valve or line" means any valve, except pressure release valves, having one side of the valve seat in contact with hazardous waste and one side open to the atmosphere, either directly or through open piping.
26. "Pressure release" means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure release device.
27. "Process heater" means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.
28. "Process vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.
29. "Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak.
30. "Sampling connection system" means an assembly of equipment within a process or waste management unit used during periods of representative operation to take samples of the process of waste fluid. Equipment used to take nonroutine grab examples is not considered a sampling connection system.
31. "Sensor" means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.
32. "Separator tank" means a device used for separation of two immiscible liquids.
33. "Solvent extraction operation" means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.
34. "Start-up" means the setting in operation of a hazardous waste management unit or control device for any purpose.
35. "Steam stripping operation" means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.
36. "Surge control tank" means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

37. "Thin-film evaporation operation" means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.
38. "Vapor incinerator" means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.
39. "Vented" means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-402. Standards - Process vents.

1. The owner or operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations managing hazardous wastes with organic concentrations of at least ten parts per million weight shall either:
- a. Reduce total organic emissions from all affected process vents at the facility below one and four-tenths kilograms/hour (three pounds per hour) and two and eight-tenths megagrams/year (three and one-tenth tons/year); or
- b. Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by ninety-five weight percent.
2. If the owner or operator installs a closed-vent system and control device to comply with the provisions of subsection 1, the closed-vent system and control device must meet the requirements of section 33.1-24-05-403.
3. Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of subsection 3 of section 33.1-24-05-404.
4. When an owner or operator and the department do not agree on determinations of vent emissions or emission reductions, or both, or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in subsection 3 of section 33.1-24-05-404 must be used to resolve the disagreement.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-403. Standards - Closed-vent systems and control devices.

1. Requirements for owners or operators of closed-vent systems and control devices.

a. Owners or operators of closed-vent systems and control devices used to comply with provisions of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 shall comply with the provisions of this section.

b. For:

(1) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 on the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33.1-24-05-400 through 33.1-24-05-419 for installation and start-up.

(2) Any unit that begins operation after December 21, 1990, and is subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 when operation begins, must comply with the rules immediately (for example, must have control devices installed and operating on start-up of the affected unit); the thirty-month implementation schedule does not apply.

(3) The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to sections 33.1-24-05-400 through 33.1-24-05-419 shall comply with all requirements of sections 33.1-24-05-400 through 33.1-24-05-419 as soon as practicable but no later than thirty months after the amendment's effective date. When control equipment required by sections 33.1-24-05-400 through 33.1-24-05-419 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of onsite installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of sections 33.1-24-05-400 through 33.1-24-05-419. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

(4) Owners and operators of facilities and units that become newly subject to the requirements of sections 33.1-24-05-400 through 33.1-24-05-419 after December 8, 1997, due to an action other than those described in paragraph 3 must comply with all applicable requirements immediately (for example, must have control devices installed and operating on the date the facility or unit becomes subject to sections 33.1-24-05-400 through 33.1-24-05-419; the thirty-month implementation schedule does not apply).

2. A control device involving vapor recovery (for example, a condenser or absorber) must be designed and operated to recover the organic vapors vented to it with an efficiency of ninety-five weight percent or greater unless the total organic emission limits of subdivision a of subsection 1 of section 33.1-24-05-402 for all affected process vents can be attained at an efficiency less than ninety-five weight percent.

3. An enclosed combustion device (for example, a vapor incinerator, boiler, or process heater) must be designed and operated to reduce the organic emissions vented to it by ninety-five weight percent or greater; to achieve a total organic compound concentration of twenty parts per million volume, expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to three percent oxygen; or to provide a minimum residence time of fifty hundredths seconds at a minimum temperature of seven hundred sixty degrees Celsius. If a boiler or process heater is used as the control device, then the vent stream must be introduced into the flame zone of the boiler or process heater.

4. Flares.

a. A flare must be designed for and operated with no visible emissions as determined by the methods specified in subdivision a of subsection 5, except for periods not to exceed a total of five minutes during any two consecutive hours.

b. A flare must be operated with a flame present at all times, as determined by the methods specified in paragraph 3 of subdivision b of subsection 6.

c. A flare must be used only if the net heating value of the gas being combusted is eleven and two-tenths mega joules per standard cubic meter at standard conditions (three hundred British thermal units per standard cubic foot at standard conditions) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is seven and forty-five hundredths mega joules per cubic meter at standard conditions (two hundred British thermal units per standard cubic foot at standard conditions) or greater if the flare is nonassisted. The net heating value of the gas being combusted must be determined by the methods specified in subdivision b of subsection 5.

d. Steam-assisted or nonassisted flare.

(1) A steam-assisted or nonassisted flare must be designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, less than eighteen and three-tenths meters per second [sixty feet per second], except as provided in paragraphs 2 and 3.

(2) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of subsection 5, equal to or greater than eighteen and three-tenths meters per second [sixty feet per second] but less than one hundred twenty-two meters per second [four hundred feet per second] is allowed if the net heating value of the gas being combusted is greater than thirty-seven and three-tenths mega joules per standard cubic meter at standard conditions [one thousand British thermal units per standard cubic foot at standard conditions].

(3) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in subdivision c of

subsection 5, less than the velocity V_{max} as determined by the method specified in subdivision d of subsection 5 and less than one hundred twenty-two meters per second [four hundred feet per second] is allowed.

- e. An air-assisted flare must be designed and operated with an exit velocity less than the velocity V_{max} as determined by the method specified in subdivision e of subsection 5.
- f. A flare used to comply with this section must be steam-assisted, air-assisted, or nonassisted.

5. Methods.

- a. Referenced method 22 in 40 CFR part 60 must be used to determine the compliance of a flare with the visible emissions provisions of sections 33.1-24-05-400 through 33.1-24-05-419. The observation period is two hours and must be used according to method 22.
- b. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \left[\sum_{i=1}^n C_i H_i \right]$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20°C;

K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by reference method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in section 33.1-24-01-05); and

H_i = Net heat of combustion of sample component i , kcal/g mol at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in section 33.1-24-01-05) if published values are not available or cannot be calculated.

- c. The actual exit velocity of a flare must be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by reference methods 2, 2a, 2c, or 2d in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.
- d. The maximum allowed velocity in meters per second V_{max} for a flare complying with paragraph 3 of subdivision d of subsection 4 must be determined by the following equation:

$$\log_{10}(V_{max}) = (H_T + 28.8)/31.7$$

where:

28.8 = constant,

31.7 = constant, and

H_T = the net heating value as determined in subdivision b.

- e. The maximum allowed velocity in meters per second V_{max} for an air-assisted flare must be determined by the following equation:

$$V_{max} = 8.706 + 0.7084(H_T)$$

where:

8.706 = constant,

0.7084 = constant, and

H_T = the net heating value as determined in subdivision b.

6. The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

a. Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor must be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

b. Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(1) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor must be installed at a location in the combustion chamber downstream of the combustion zone.

(2) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature at two locations and have an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. One temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor must be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(3) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

- (4) A boiler or process heater having a design heat input capacity less than forty-four megawatts a temperature monitoring device equipped with a continuous recorder. The device must have an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor must be installed at a location in the furnace downstream of the combustion zone.
- (5) For a boiler or process heater having a design heat input capacity greater than or equal to forty-four megawatts a monitoring device equipped with a continuous recorder to measure a parameter that indicates good combustion operating practices are being used.
- (6) For a condenser, either:
- (a) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds, the exhaust vent stream from the condenser; or
- (b) A temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of plus or minus one percent of the temperature being monitored in degrees Celsius or plus or minus five-tenths degrees Celsius, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (for example, product side).
- (7) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber either:
- (a) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed; or
- (b) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated in a regular predetermined time cycle.
- c. Inspect the readings from each monitoring device required by subdivisions a and b at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.
7. An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular predetermined time interval that is no longer than the carbon service life established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.
8. An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

- a. Monitor the concentration level of organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency must be daily or at an interval no greater than twenty percent of the time required to consume the total carbon working capacity established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405, whichever is longer.
 - b. Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of subparagraph g of paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.
- 9. An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.
- 10. An owner or operator of an affected facility seeking to comply with the provisions of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation, including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.
- 11. A closed-vent system shall meet either of the following design requirements:
 - a. A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million volume above background as determined by the procedure in subsection 2 of section 33.1-24-05-404, and by visual inspections; or
 - b. A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.
- 12. The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:
 - a. Each closed-vent system that is used to comply with subdivision a of subsection 11 shall be inspected and monitored in accordance with the following requirements:
 - (1) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in subsection 2 of section 33.1-24-05-404 to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an

instrument reading of less than five hundred parts per million volume above background.

(2) After initial leak detection monitoring required in paragraph 1, the owner or operator shall inspect and monitor the closed-vent system as follows:

(a) Closed-vent system joints, seams, or other connections that are permanently or semipermanently sealed (for example, a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in subsection 2 of section 33.1-24-05-404 to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (for example, a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (for example, a flange is unbolted).

(b) Closed-vent system components or connections other than those specified in subparagraph a shall be monitored annually and at other times as requested by the department, except as provided for in subsection 15, using the procedures specified in subsection 2 of section 33.1-24-05-404 to demonstrate that the components or connections operate with no detectable emissions.

(3) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of subdivision c.

(4) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33.1-24-05-405.

b. Each closed-vent system that is used to comply with subdivision b of subsection 11 shall be inspected and monitored in accordance with the following requirements:

(1) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in duct work or piping or loose connections.

(2) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

(3) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of subdivision c.

(4) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in section 33.1-24-05-405.

c. The owner or operator shall repair all detected defects as follows:

- (1) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than five hundred parts per million volume above background, shall be controlled as soon as practicable, but not later than fifteen calendar days after the emission is detected, except as provided for in paragraph 3.
 - (2) A first attempt at repair shall be made no later than five calendar days after the emission is detected.
 - (3) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.
 - (4) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in section 33.1-24-05-405.
13. Closed-vent systems and control devices used to comply with provisions of sections 33.1-24-05-400 through 33.1-24-05-419 must be operated at all times when emissions may be vented to them.
14. The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:
- a. Regenerated or reactivated in a thermal treatment unit that meets one of the following:
 - (1) The owner or operator of the unit has been issued a final permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-300 through 33.1-24-05-309; or
 - (2) The unit is equipped with operating air emission controls in accordance with the applicable requirements of sections 33.1-24-05-400 through 33.1-24-05-419 and sections 33.1-24-05-450 through 33.1-24-05-474 or the applicable requirements of subsection 5 of section 33.1-24-06-16; or
 - (3) The unit is equipped with operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.
 - b. Incinerated in a hazardous waste incinerator for which the owner or operator either:
 - (1) Has been issued a final permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-144 through 33.1-24-05-159; or
 - (2) Has designed and operates the incinerator in accordance with the applicable interim status requirements of subsection 5 of section 33.1-24-06-16.
 - c. Burned in a boiler or industrial furnace for which the owner or operator either:

- (1) Has been issued a final permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-525 through 33.1-24-05-549; or
 - (2) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of sections 33.1-24-05-525 through 33.1-24-05-549.
15. Any components of a closed-vent system that are designated, as described in subdivision i of subsection 3 of section 33.1-24-05-405, as unsafe to monitor are exempt from the requirements of subparagraph b of paragraph 2 of subdivision a of subsection 12 if:
- a. The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subparagraph b of paragraph 2 of subdivision a of subsection 12; and
 - b. The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedures specified in subparagraph b of paragraph 2 of subdivision a of subsection 12 as frequently as practicable during safe-to-monitor times.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-404. Test methods and procedures.

- 1. Each owner or operator subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 shall comply with the test methods and procedures requirements provided in this section.
- 2. When a closed-vent system is tested for compliance with no detectable emissions, as required in subsection 12 of section 33.1-24-05-403, the test must comply with the following requirements:
 - a. Monitoring must comply with referenced method 21 in 40 CFR part 60.
 - b. The detection instrument must meet the performance criteria of reference method 21.
 - c. The instrument must be calibrated before use on each day of its use by the procedures specified in reference method 21.
 - d. Calibration gases must be:
 - (1) Zero air (less than ten parts per million hydrocarbon in air).
 - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or n-hexane.
 - e. The background level must be determined as set forth in reference method 21.

- f. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
- g. The arithmetic difference between the maximum concentration indicated by the instrument and background level is compared with five hundred parts per million for determining compliance.
3. Performance tests to determine compliance with subsection 1 of section 33.1-24-05-402 and with the total organic compound concentration limit of subsection 3 of section 33.1-24-05-403 must comply with the following:
- a. Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices must be conducted and data reduced in accordance with the following reference methods and calibration procedures:
- (1) Method 2 in 40 CFR part 60 for velocity and volume flow rate.
- (2) Method 18 or Method 25A in 40 CFR part 60, appendix A, for organic content. If Method 25A is used, the organic hazardous air pollutant used as the calibration gas must be the single organic hazardous air pollutant representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least twenty times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.
- (3) Each performance test must consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs apply. The average must be computed on a time-weighted basis.
- (4) Total organic mass flow rates must be determined by the following equation:
- (a) For sources utilizing method 18.

$$E_h = Q_{2sd} \left[\sum_{i=1}^n C_i MW_i \right] [0.0416][10^{-6}]$$

where:

E_h = Total organic mass flow rate, kg/h;

Q_{2sd} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@293K and 760 mm Hg); and

10⁻⁶ = Conversion from ppm.

(b) For sources utilizing method 25A.

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

where:

E_h = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

C = Organic concentration in ppm, dry basis, as determined by Method 25A;

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10⁻⁶ = Conversion from ppm.

(5) The annual total organic emission rate must be determined by the following equation:

$$E_A = (E_h)(H)$$

where:

E_A = Total organic mass emission rate, kg/y;

E_h = Total organic mass flow rate for the process vent, kg/h;

H = Total annual hours of operations for the affected unit, h.

(6) Total organic emissions from all affected process vents at the facility must be determined by summing the hourly total organic mass emission rates (E_h as determined in paragraph 4) and by summing the annual total organic mass emission rates (E_A, as determined in paragraph 5) for all affected process vents at the facility.

b. The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown, and malfunction do not constitute representative conditions for the purpose of a performance test.

c. The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for the test methods specified in subdivision a .

(2) Safe sampling platforms.

(3) Safe access to sampling platforms.

(4) Utilities for sampling and testing equipment.

d. For the purpose of making compliance determinations, the time-weighted average of the results of the three runs applies. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of force shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner's or operator's control, compliance may, upon the department's approval, be determined using the average of the results of the two other runs.

4. To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of sections 33.1-24-05-400 through 33.1-24-05-419, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than ten parts per million weight using one of the following two methods:

a. Direct measurement of the organic concentration of the waste using the following procedures:

(1) The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

(2) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(3) Each sample must be analyzed and the total organic concentration of the sample must be computed using method 9060A (incorporated by reference under section 33.1-24-01-05) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," environmental protection agency publication SW-846 or analyzed for its individual organic constituents.

(4) The arithmetic mean of the results of the analysis of the four samples applies for each waste stream managed in the unit in determining the time-weighted annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

b. Using knowledge of the waste to determine that its total organic concentration is less than ten parts per million weight. Documentation of the waste determination is required. Examples of documentation that must be used to support a determination under this provision include production process information documenting that no

organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to generate a waste stream having a total organic content less than ten parts per million weight, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

5. The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than ten parts per million weight must be made as follows:

a. By the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 or by the date when the waste is first managed in a waste management unit, whichever is later; and

b. For continuously generated waste, annually; or

c. Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

6. When an owner or operator and the department do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least ten parts per million weight based on knowledge of the waste, the dispute may be resolved by using direct measurement as specified at subdivision a of subsection 4.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-405. Recordkeeping requirements.

1. Applicability.

a. Each owner or operator subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 shall comply with the recordkeeping requirements of this section.

b. An owner or operator of more than one hazardous waste management unit subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

2. Owners and operators must record the following information in the facility operating record:

a. For facilities that comply with the provisions of subdivision b of subsection 1 of section 33.1-24-05-403, an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed

at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419.

b. Up-to-date documentation of compliance with the process vent standards in section 33.1-24-05-402, including:

(1) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent, and for the overall facility, namely, the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, for example, identifying the hazardous waste management units on a facility plot plan.

(2) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculation or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values, for example, temperatures, flow rates, or vent stream organic compounds and concentrations, that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action, for example, managing a waste of different composition or increasing operating hours of affected waste management units, that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

c. Where an owner or an operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:

(1) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This must include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(2) A detailed engineering description of the closed-vent system and control device, including:

(a) Manufacturer's name and model number of control device.

(b) Type of control device.

(c) Dimensions of the control device.

(d) Capacity.

(e) Construction materials.

(3) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

d. Documentation of compliance with section 33.1-24-05-403 must include the following information:

(1) A list of all information references and sources used in preparing the documentation.

(2) Records, including the dates, of each compliance test required by subsection 11 of section 33.1-24-05-403.

(3) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "Apti course 415: control of gaseous emissions" (incorporated by reference as specified in section 33.1-24-01-05) or other engineering texts acceptable to the department that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with subparagraphs a through g may be used to comply with this requirement. The design analysis must address the vent stream characteristics and control device operation parameters as specified below:

(a) For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(b) For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(c) For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of methods and location where the vent stream is introduced into the combustion zone.

(d) For a flare, the design analysis must consider the vent stream composition, constituent concentration, and flow rate. The design analysis must also consider the requirements specified in subsection 4 of section 33.1-24-05-403.

(e) For a condenser, the design analysis must consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic compound concentration level, design average temperature of

the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(f) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design exhaust vent stream organic compound concentration level, the number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling or drying cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(g) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five percent or greater unless the total organic concentration limit of subsection 1 of section 33.1-24-05-402 is achieved at an efficiency less than ninety-five weight percent or the total organic emission limits of subsection 1 of section 33.1-24-05-402 for affected process vents at the facility can be obtained by a control device involving vapor recovery at an efficiency less than ninety-five weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(6) If performance tests are used to demonstrate compliance, all test results.

3. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 must be recorded and up to date in the facility operating record. The information must include:

a. Description and date of each modification that is made to the closed-vent system or control device design.

- b. Identification of operating parameters, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with subdivisions a and b of subsection 6 of section 33.1-24-05-403.
- c. Monitoring, operating, and inspection information required by subsections 6 through 11 of section 33.1-24-05-403.
- d. Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:
- (1) For a thermal vapor incinerator designed to operate with a minimum residence time of fifty hundredths seconds at a minimum temperature of seven hundred sixty degrees Celsius, period when the combustion temperature is below seven hundred sixty degrees Celsius.
- (2) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of ninety-five weight percent or greater, period when the combustion zone temperature is more than twenty-eight degrees Celsius below the designed average combustion zone temperature established as a requirement of subparagraph a of paragraph 3 of subdivision d of subsection 2.
- (3) For a catalytic vapor incinerator, period when:
- (a) Temperature of the vent stream at the catalytic bed inlet is more than twenty-eight degrees Celsius below the average temperature of the inlet vent stream established as a requirement of subparagraph b of paragraph 3 of subdivision d of subsection 2; or
- (b) Temperature difference across the catalyst bed is less than eighty percent of the design average temperature difference established as a requirement of subparagraph b of paragraph 3 of subdivision d of subsection 2.
- (4) For a boiler or process heater, period when:
- (a) Flame zone temperature is more than twenty-eight degrees Celsius below the design average flame zone temperature established as a requirement of subparagraph c of paragraph 3 of subdivision d of subsection 2; or
- (b) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of subparagraph c of paragraph 3 of subdivision d of subsection 2.
- (5) For a flare, period when the pilot flame is not ignited.
- (6) For a condenser that complies with subparagraph a of paragraph 6 of subdivision b of subsection 6 of section 33.1-24-05-403, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than twenty percent greater than the design outlet organic compound concentration level

established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.

(7) For a condenser that complies with subparagraph b of paragraph 6 of subdivision b of subsection 6 of section 33.1-24-05-403, period when:

(a) Temperature of the exhaust vent stream from the condenser is more than six degrees Celsius above the design average exhaust vent stream temperature established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2; or

(b) Temperature of the coolant fluid exiting the condenser is more than six degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of subparagraph e of paragraph 3 of subdivision d of subsection 2.

(8) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates carbon bed directly onsite in the control device and complies with subparagraph a of paragraph 7 of subdivision b of subsection 6 of section 33.1-24-05-403, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.

(9) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with subparagraph b of paragraph 7 of subdivision b of subsection 6 of section 33.1-24-05-403, period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of subparagraph f of paragraph 3 of subdivision d of subsection 2.

e. Explanation for each period recorded under subdivision d of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

f. For a carbon adsorption system operated subject to requirements specified in subsection 7 of section 33.1-24-05-403 or subdivision b of subsection 8 of section 33.1-24-05-403, date when existing carbon in the control device is replaced with fresh carbon.

g. For a carbon adsorption system operated subject to requirements specified in subdivision a of subsection 8 of section 33.1-24-05-403, a log that records:

(1) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(2) Date when existing carbon in the control device is replaced with fresh carbon.

h. Date of each control device startup and shutdown.

- i. An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to subsection 15 of section 33.1-24-05-403 shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of subsection 15 of section 33.1-24-05-403, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.
- j. When each leak is detected as specified in subsection 12 of section 33.1-24-05-403, the following information shall be recorded:
- (1) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number;
 - (2) The date the leak was detected and the date of first attempt to repair the leak;
 - (3) The date of successful repair of the leak;
 - (4) Maximum instrument reading measured by method 21 of 40 CFR part 60, appendix A, after it is successfully repaired or determined to be nonrepairable; and
 - (5) "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak:
 - (a) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
 - (b) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.
4. Records of the monitoring, operating, and inspection information required by subdivisions c through j of subsection 3 must be maintained by the owner or operator for at least three years following the date of each occurrence, measurement, maintenance, corrective action, or record.
5. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
6. Up to date information and data used to determine whether or not a process vent is subject to the requirements in section 33.1-24-05-402, including supporting documentation as required by subdivision b of subsection 4 of section 33.1-24-05-404 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, must be recorded in a log that is kept in the facility operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-406. Reporting requirements.

1. A semiannual report must be submitted by owners and operators subject to the requirements of sections 33.1-24-05-400 through 33.1-24-05-419 to the department by dates specified by the department. The report must include the following information:
 - a. The identification number, name, and address of the facility.
 - b. For each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in subdivision d of subsection 3 of section 33.1-24-05-405 and as indicated by the control device monitoring required by subsection 6 of section 33.1-24-05-403 and such exceedances were not corrected within twenty-four hours, or that a flare operated with visible emissions as designed in subsection 4 of section 33.1-24-05-03 and as determined by method 22 monitoring, the duration and cause of each exceedance or visible emission, and any corrective measures taken.
2. If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in subdivision d of subsection 3 of section 33.1-24-05-405 for more than twenty-four hours or a flare does not operate with visible emissions as defined in subsection 4 of section 33.1-24-05-403, a report to the department is not required.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-407. [Reserved]

33.1-24-05-408. [Reserved]

33.1-24-05-409. [Reserved]

33.1-24-05-410. [Reserved]

33.1-24-05-411. [Reserved]

33.1-24-05-412. [Reserved]

33.1-24-05-413. [Reserved]

33.1-24-05-414. [Reserved]

33.1-24-05-415. [Reserved]

33.1-24-05-416. [Reserved]

33.1-24-05-417. [Reserved]

33.1-24-05-418. [Reserved]

33.1-24-05-419. [Reserved]

33.1-24-05-420. Applicability to air emission standards for equipment leaks.

1. The regulations in sections 33.1-24-05-420 through 33.1-24-05-449 apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in section 33.1-24-05-01).
2. Except as provided in subsection 11 of section 33.1-24-05-434, sections 33.1-24-05-420 through 33.1-24-05-449 apply to equipment that contains or contacts hazardous waste with organic concentrations of at least ten percent by weight that are managed in one of the following:
 - a. A unit that is subject to the permitting requirements of chapter 33.1-24-06;
 - b. A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of subsection 1 of section 33.1-24-03-12 (for example, a hazardous waste recycling unit that is not a ninety-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of chapter 33.1-24-06; or
 - c. A unit that is exempt from permitting under the provisions of subsection 1 of section 33.1-24-03-12 (for example, a ninety-day tank or container) and is not a recycling unit under the provisions of section 33.1-24-02-06.
3. For the owner or operator of a facility subject to sections 33.1-24-05-420 through 33.1-24-05-449 and who received a final state-issued hazardous waste permit under article 33.1-24 prior to December 6, 1996, the requirements of sections 33.1-24-05-420 through 33.1-24-05-449 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of section 33.1-24-07-11 or reviewed in accordance with the requirements of section 33.1-24-06-06. Until such date when the owner or operator receives a final state-issued hazardous waste permit incorporating the requirements of sections 33.1-24-05-420 through 33.1-24-05-449, the owner or operator is subject to the applicable requirements of subsection 5 of section 33.1-24-06-16.
4. Each piece of equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 apply must be marked in such a manner that it can be distinguished readily from other pieces of equipment.
5. Equipment that is in vacuum service is excluded from the requirements of sections 33.1-24-05-422 to 33.1-24-05-430 if it is identified as required in subdivision e of subsection 7 of section 33.1-24-05-434.
6. Equipment that contains or contacts hazardous waste with an organic concentration of at least ten percent by weight for less than three hundred hours per calendar year is excluded from the requirements of sections 33.1-24-05-422 through 33.1-24-05-430 if it is identified as required in subdivision f of subsection 7 of section 33.1-24-05-434.
7. Purged coatings and solvents from surface coating operations subject to the national emission standards for hazardous air pollutants (NESHAP) for the surface coating of automobiles and light-duty trucks at 40 CFR part 63, subpart IIII, are not subject to the requirements of sections 33.1-24-05-420 through 33.1-24-05-449.

[Note: The requirements of sections 33.1-24-05-422 through 33.1-24-05-435 apply to equipment associated with hazardous waste recycling units previously exempt under

subdivision a of subsection 3 of section 33.1-24-02-06. Other exemptions under section 33.1-24-02-04 and subsection 7 of section 33.1-24-05-01 are not affected by these requirements.]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-421. Definitions as used in sections 33.1-24-05-420 through 33.1-24-05-449.

All terms have the meaning given them in section 33.1-24-05-401, North Dakota Century Code chapter 23.1-04, and chapters 33.1-24-01 through 33.1-24-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-422. Standards - Pumps in light liquid service.

1. Timeframe.

- a. Each pump in light liquid service must be monitored monthly to detect leaks by the method specified in subsection 2 of section 33.1-24-05-433, except as provided in subsections 4, 5, and 6.
- b. Each pump in light liquid service must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

2. Indicators.

- a. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.
- b. If there are indications of liquids dripping from the pump seal, a leak is detected.

3. Response.

- a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-05-429.
- b. A first attempt at repair (for example, tightening the packing gland) must be made no later than five calendar days after each leak is detected.

4. Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of subsection 1, provided the following requirements are met:

a. Each dual mechanical seal system must be:

- (1) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure;

- (2) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with requirements of section 33.1-24-05-430; or
- (3) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.
- b. The barrier fluid system must not be a hazardous waste with organic concentrations ten percent or greater by weight.
- c. Each barrier fluid system must be equipped with a sensor that will detect failure of the sealed system, the barrier fluid system, or both.
- d. Each pump must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seals.
- e. Checks.
 - (1) Each sensor as described in subdivision c must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.
 - (2) The owner or operator must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.
- f. Leaks.
 - (1) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion determined in paragraph 2 of subdivision e, a leak is detected.
 - (2) When a leak is detected it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-05-429.
 - (3) A first attempt at repair (for example, relapping the seal) must be made no later than five calendar days after each leak is detected.
- 5. Any pump that is designated, as described in subdivision b of subsection 7 of section 33.1-24-05-434, for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, is exempt from the requirements of subsections 1, 3, and 4 if the pump meets the following requirements:
 - a. Must have no externally actuated shaft penetrating the pump housing.
 - b. Must operate with no detectable emissions as indicated by an instrument reading of less than five hundred parts per million above background as measured by the methods specified in subsection 3 of section 33.1-24-05-433.
 - c. Must be tested for compliance with subdivision b initially upon designation, annually, and at other times as requested by the department.

6. If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of section 33.1-24-05-430, it is exempt from the requirements of subsections 1 through 5.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-423. Standards - Compressors.

1. Each compressor must be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in subsections 8 and 9.

2. Each compressor seal system as required in subsection 1 must be:

- a. Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure;
- b. Equipped with the barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of section 33.1-24-05-430; or
- c. Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

3. The barrier fluid must not be a hazardous waste with organic concentrations ten percent or greater by weight.

4. Each barrier fluid system as described in subsections 1 through 3 must be equipped with a sensor that would detect failure of the sealed system, barrier fluid system, or both.

5. Checks.

- a. Each sensor as required in subsection 4 must be checked daily or must be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plantsite, in which case the sensor must be checked daily.
- b. The owner or operator shall determine, based on design consideration and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

6. If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion determined under subdivision b of subsection 5, a leak is detected.

7. Leaks.

- a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-05-429.
- b. A first attempt at repair, for example, tightening the packing gland, must be made no later than five calendar days after each leak is detected.

8. A compressor is exempt from the requirements of subsections 1 and 2 if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of section 33.1-24-05-430 except as provided in subsection 9.
9. Any compressor that is designed, as described in subdivision b of subsection 7 of section 33.1-24-05-434, for no detectable emissions as indicated by an instrument reading of less than five hundred parts per million above background is exempt from the requirements of subsections 1 through 8 if the compressor:
 - a. Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-05-433.
 - b. Is tested for compliance with subdivision a of subsection 9 initially upon designation, annually, and other times as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-424. Standards - Pressure relief devices in gas or vapor service.

1. Except during pressure releases, each pressure relief device in gas or vapor service must be operated with no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-05-433.
2. Pressure release.
 - a. After each pressure release, the pressure relief device must be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as soon as practicable, but no later than five calendar days after each pressure release, except as provided in section 33.1-24-05-429.
 - b. No later than five calendar days after the pressure release, the pressure relief device must be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, as measured by the method specified in subsection 3 of section 33.1-24-05-433.
3. Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in section 33.1-24-05-430 is exempt from the requirements of subsections 1 and 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-425. Standards - Sampling connection systems.

1. Each sampling connection system must be equipped with a closed-purge, closed-loop, or closed-vent system. This system must collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.
2. Each closed-purge, closed-loop, or closed-vent system as required in subsection 1 must meet one of the following requirements:
 - a. Return the purged process fluid directly to the process line;
 - b. Collect and recycle the purged process fluid; or
 - c. Be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of sections 33.1-24-05-454 through 33.1-24-05-456 or a control device that complies with the requirements of section 33.1-24-05-430.
3. In situ sampling systems and sampling systems without purges are exempt from the requirements of subsections 1 and 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-426. Standards - Open-ended valves or lines.

1. Requirements.
 - a. Each open-ended valve or line must be equipped with a cap, blind flange, plug, or a second valve.
 - b. The cap, blind flange, plug, or second valve must seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.
2. Each open-ended valve or line equipped with a second valve must be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.
3. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but must comply with subsection 1 at all other times.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-427. Standards - Valves in gas or vapor service or in light liquid service.

1. Each valve in gas or vapor or light liquid service must be monitored monthly to detect leaks by the methods specified in subsection 2 of section 33.1-24-05-433 and must

comply with subsections 2 through 5, except as provided in subsections 6, 7, and 8 and sections 33.1-24-05-431 and 33.1-24-05-432.

2. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.

3. Timeframe.

a. Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

b. If a leak is detected, the valve must be monitored monthly until a leak is not detected for two successive months.

4. Release.

a. When a leak is detected, it must be repaired as soon as practicable, but no later than fifteen calendar days after the leak is detected, except as provided in section 33.1-24-05-429.

b. A first attempt at repair must be made no later than five calendar days after each leak is detected.

5. First attempts at repair include, but are not limited to, the following best practices where applicable:

a. Tightening of bonnet bolts.

b. Replacement of bonnet bolts.

c. Tightening of packing gland nuts.

d. Injection of lubricant into lubricated packing.

6. Any valve that is designated, as described in subdivision b of subsection 7 of section 33.1-24-05-434, for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, is exempt from the requirements of subsection 1 if the valve:

a. Has no external actuating mechanism in contact with the hazardous waste stream.

b. Is operated with emissions less than five hundred parts per million above background as determined by the methods specified in subsection 3 of section 33.1-24-05-433.

c. Is tested for compliance with subdivision b initially upon designation, annually, and at other times as requested by the department.

7. Any valve that is designated, as described in subdivision a of subsection 8 of section 33.1-24-04-434 as an unsafe-to-monitor valve is exempt from the requirements of subsection 1 if:

- a. The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with subsection 1.
 - b. The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.
8. Any valve that is designated as described in subdivision b of subsection 8 of section 33.1-24-05-434, as a difficult-to-monitor valve is exempt from the requirements of subsection 1 if:
- a. The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than two meters above a support surface.
 - b. The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.
 - c. The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-428. Standards - Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.

- 1. Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors must be monitored within five days by the method specified in subsection 2 of section 33.1-24-05-433 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
- 2. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.
- 3. Timeframe.
 - a. When a leak is detected, it must be repaired as soon as practicable, but not later than fifteen calendar days after it is detected, except as provided in section 33.1-24-05-429.
 - b. The first attempt at repair must be made no later than five calendar days after each leak is detected.
- 4. First attempts at repair include, but are not limited to, the best practices described under subsection 5 of section 33.1-24-05-427.
- 5. Any connector that is inaccessible or is ceramic or ceramic-lined (for example, porcelain, glass, or glass-lined) is exempt from the monitoring requirements of subsection 1 and from the recordkeeping requirements of section 33.1-24-05-434.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-429. Standards - Delay of repair.

1. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically unfeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment must occur before the end of the next hazardous waste management unit shutdown.
2. Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations of at least ten percent by weight.
3. Delay of repair for valves will be allowed if:
 - a. The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.
 - b. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with section 33.1-24-05-430.
4. Delay of repair for pumps will be allowed if:
 - a. Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.
 - b. Repair is completed as soon as practicable, but not later than six months after the leak was detected.
5. Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than six months after the first hazardous waste management unit shutdown.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-430. Standards - Closed-vent systems and control devices.

1. Owners and operators of closed-vent systems and control devices subject to sections 33.1-24-05-420 through 33.1-24-05-449 shall comply with the provisions of section 33.1-24-05-403.
2. For:
 - a. The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 on the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 must prepare an

implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to thirty months after the effective date that the facility becomes subject to sections 33.1-24-05-420 through 33.1-24-05-449 for installation and start-up.

b. Any unit that begins operation after December 21, 1990, and is subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 when operation begins, must comply with the rules immediately (for example, must have control devices installed and operating on start-up of the affected unit); the thirty-month implementation schedule does not apply.

c. The owner or operator of any facility in existence on the effective date of a statutory or regulatory amendment that renders the facility subject to sections 33.1-24-05-420 through 33.1-24-05-449 shall comply with all requirements of sections 33.1-24-05-420 through 33.1-24-05-449 as soon as practicable but no later than thirty months after the amendment's effective date. When control equipment required by sections 33.1-24-05-420 through 33.1-24-05-449 cannot be installed and begin operation by the effective date of the amendment, the facility owner or operator shall prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of onsite installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of sections 33.1-24-05-420 through 33.1-24-05-449. The owner or operator shall enter the implementation schedule in the operating record or in a permanent, readily available file located at the facility.

d. Owners and operators of facilities and units that become newly subject to the requirements of sections 33.1-24-05-420 through 33.1-24-05-449 after December 8, 1997, due to an action other than those described in subdivision c must comply with all applicable requirements immediately (for example, must have control devices installed and operating on the date the facility or unit becomes subject to sections 33.1-24-05-420 through 33.1-24-05-449; the thirty-month implementation schedule does not apply).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-431. Alternative standards for valves in gas or vapor service or light liquid service - Percentage of valves allowed to leak.

1. An owner or operator subject to the requirements of section 33.1-24-05-427 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than two percent of the valves to leak.

2. The following requirements must be met if an owner or operator decides to comply with the alternative standard of allowing two percent of valves to leak:

a. A performance test as specified in subsection 3 must be conducted initially upon designation, annually, and at other times requested by the department.

b. If a valve leak is detected, it must be repaired in accordance with subsections 4 and 5 of section 33.1-24-05-427.

3. Performance tests must be conducted in the following manner:

a. All valves subject to requirements in section 33.1-24-05-427 within the hazardous waste management unit shall be monitored within one week by the methods specified in subsection 2 of section 33.1-24-05-433.

b. If an instrument reading of ten thousand parts per million or greater is measured, a leak is detected.

c. The leak percentage must be determined by dividing the number of valves subject to the requirements in section 33.1-24-05-427 for which leaks are detected by the total number of valves subject to the requirements in section 33.1-24-05-427 within the hazardous waste management unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-432. Alternative standard for valves in gas or vapor service or in light liquid service - Skip period leak detection and repair.

1. An owner or operator subject to the requirements of section 33.1-24-05-427 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in subdivisions b and c of subsection 2.

2. Requirements.

a. An owner or operator shall comply with the requirements for valves, as described in section 33.1-24-05-427, except as described in subdivisions b and c.

b. After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip one of the quarterly leak detection periods (for example, monitor for leaks once every six months) for the valves subject to the requirements in section 33.1-24-05-427.

c. After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than two percent, an owner or operator may begin to skip three of the quarterly leak detection periods (for example, monitor for leaks once every year) for the valves subject to the requirements in section 33.1-24-05-427.

d. If the percentage of valves leaking is greater than two percent, the owner or operator shall monitor monthly in compliance with the requirements in section 33.1-24-05-427, but may again elect to use this section after meeting the requirements of subdivision a of subsection 3 of section 33.1-24-05-427.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-433. Test methods and procedures.

1. Each owner or operator subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 shall comply with the test methods and procedures requirements provided in this section.
2. Leak detection monitoring, as required in sections 33.1-24-05-422 through 33.1-24-05-432, must comply with the following requirements:
 - a. Monitoring must comply with reference method 21 in 40 CFR part 60.
 - b. The detection instrument must meet the performance criteria of reference method 21.
 - c. The instrument must be calibrated before use on each day of its use by the procedures specified in reference method 21.
 - d. Calibration gas must be:
 - (1) Zero air (less than ten parts per million of hydrocarbon in air).
 - (2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million methane or n-hexane.
 - e. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
3. When equipment is tested for compliance with no detectable emissions, as required in subsection 5 of section 33.1-24-05-422, subsection 9 of section 33.1-24-05-423, section 33.1-24-05-424, and subsection 6 of section 33.1-24-05-427, the test must comply with the following requirements:
 - a. The requirements of subdivisions a through d of subsection 2 apply.
 - b. The background level must be determined as set forth in reference method 21.
 - c. The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in reference method 21.
 - d. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with five hundred parts per million for determining compliance.
4. In accordance with the waste analysis plan required by subsection 2 of section 33.1-24-05-04, an owner or operator of the facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds ten percent by weight using the following:
 - a. Methods described in American society for testing and materials methods D2267-88, E169-87, E168-88, E260-85 (incorporated by reference under section 33.1-24-01-05);
 - b. Method 9060A (incorporated by reference under section 33.1-24-01-05) of "Test Methods for Evaluating Solid Waste," environmental protection agency publication

SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents; or

c. Application of the knowledge of the nature of the hazardous waste stream or process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that must be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has previously been demonstrated by direct measurement to have a total organic content less than ten percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

5. If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least ten percent by weight, the determination can be revised only after following the procedures in subdivision a or b of subsection 4.

6. When an owner or operator and the department do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least ten percent by weight, the procedures in subdivision a or b of subsection 4 can be used to resolve the dispute.

7. Samples used in determining the percent organic content must be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

8. To determine if pump or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by American society for testing and materials D-2879-86 (incorporated by reference under section 33.1-24-01-05).

9. Performance tests to determine if control device achieves ninety-five weight percent organic emission reduction shall comply with the procedures of subdivisions a through d of subsection 3 of section 33.1-24-05-404.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-434. Recordkeeping requirements.

1. Owner or operator.

a. Each owner or operator subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 shall comply with the recordkeeping requirements of this section.

b. An owner or operator of more than one hazardous waste management unit subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 may comply with the recordkeeping requirements for these hazardous waste management units

in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

2. Owners and operators must record the following information in the facility operating record:

a. For each piece of equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 applies:

(1) Equipment identification number and hazardous waste management unit identification.

(2) Approximate locations within the facility, for example, identify the hazardous waste management unit on a facility plot plan.

(3) Type of equipment, for example, a pump or pipeline valve.

(4) Percent-by-weight total organics in the hazardous waste stream at the equipment.

(5) Hazardous waste state at the equipment, for example, gas/vapor or liquid.

(6) Method of compliance with the standard, for example, "monthly leak detection and repair" or "equipped with dual mechanical seals".

b. For facilities that comply with the provisions of subdivision b of subsection 1 of section 33.1-24-05-403, an implementation schedule as specified in subdivision b of subsection 1 of section 33.1-24-05-403.

c. Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-05-405.

d. Documentation of compliance with section 33.1-24-05-430, including the detailed design documentation or performance test results specified in subdivision d of subsection 2 of section 33.1-24-05-405.

3. When each leak is detected as specified in sections 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-427, and 33.1-24-05-428, the following requirements apply:

a. A weatherproof and fully visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with subsection 1 of section 33.1-24-05-428, and the date the leak was detected, must be attached to the leaking equipment.

b. The identification on equipment, except on a valve, may be removed after it has been repaired.

c. The identification on a valve may be removed after it has been monitored for two successive months as specified in subsection 3 of section 33.1-24-05-427 and no leak has been detected during those two months.

4. When each leak is detected as specified in sections 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-427, and 33.1-24-05-428, the following information must be recorded in an inspection log and must be kept in the facility operating record:
 - a. The instrument and operator identification numbers and the equipment identification number.
 - b. The date evidence of a potential leak was found in accordance with subsection 1 of section 33.1-24-05-428.
 - c. The date the leak was detected and the dates of each attempt to repair the leak.
 - d. Repair methods applied in each attempt to repair the leak.
 - e. "Above ten thousand" if the maximum instrument reading measured by the methods specified in subsection 2 of section 33.1-24-05-433 after each repair attempt is equal to or greater than ten thousand parts per million.
 - f. "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.
 - g. Documentation supporting the delay of repair of a valve in compliance with subsection 3 of section 33.1-24-05-429.
 - h. The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.
 - i. The expected date of successful repair of the leak if a leak is not repaired within fifteen calendar days.
 - j. The date of successful repair of the leak.
5. Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of section 33.1-24-05-430 must be recorded and kept up-to-date in the facility operating record as specified in subsection 3 of section 33.1-24-05-405. Design documentation as specified in subdivisions a and b of subsection 3 of section 33.1-24-05-405 and monitoring, operating, and inspection information in subdivisions c through h of subsection 3 of section 33.1-24-05-405.
6. For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the department will specify the appropriate recordkeeping requirements.
7. The following information pertaining to all equipment subject to the requirements in sections 33.1-24-05-422 through 33.1-24-05-430 must be recorded in a log that is kept in the facility operating record:
 - a. A list of identification numbers for equipment (except welded fitting) subject to the requirements of sections 33.1-24-05-420 through 33.1-24-05-449.
 - b. Equipment.

- (1) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than five hundred parts per million above background, under the provisions of subsection 5 of section 33.1-24-05-422, subsection 9 of section 33.1-24-05-423, and subsection 6 of section 33.1-24-05-427.
- (2) The designation of this equipment as subject to the requirements of subsection 5 of section 33.1-24-05-422, subsection 9 of section 33.1-24-05-423, or subsection 6 of section 33.1-24-05-427 must be signed by the owner or operator.
- c. A list of equipment identification numbers for pressure relief devices required to comply with subsection 1 of section 33.1-24-05-424.
- d. Data.
 - (1) The dates of each compliance test required in subsection 5 of section 33.1-24-05-422, subsection 9 of section 33.1-24-05-423, section 33.1-24-05-424, and subsection 6 of section 33.1-24-05-427.
 - (2) The background level measured during each compliance test.
 - (3) The maximum instrument reading measured at the equipment during each compliance test.
- e. A list of identification numbers for equipment in vacuum service.
- f. Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least ten percent by weight for less than three hundred hours per calendar year.
- 8. The following information pertaining to all valves subject to the requirements of subsections 7 and 8 of section 33.1-24-05-427 must be recorded in a log that is kept in the facility operating record.
 - a. A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.
 - b. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.
- 9. The following information must be recorded in the facility operating record for valves complying with section 33.1-24-05-432:
 - a. A schedule of the monitoring.
 - b. The percent of valves found leaking during each monitoring period.
- 10. The following information must be recorded in a log that is kept in the facility operating record:

- a. Criteria required in paragraph 2 of subdivision e of subsection 4 of section 33.1-24-05-422 and subdivision b of subsection 5 of section 33.1-24-05-423 and an explanation of the design criteria.
 - b. Any changes to these criteria and the reasons for the changes.
11. The following information must be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of sections 33.1-24-05-420 through 33.1-24-05-449 and other specific sections:
- a. An analysis determining the design capacity of the hazardous waste management unit.
 - b. A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in sections 33.1-24-05-422 through 33.1-24-05-430 and an analysis determining whether these hazardous wastes are heavy liquids.
 - c. An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in sections 33.1-24-05-422 through 33.1-24-05-430. The record must include supporting documentation as required by subdivision c of subsection 4 of section 33.1-24-05-433 when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action, for example, changing the process that produced the waste, that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in sections 33.1-24-05-422 through 33.1-24-05-430, then a new determination is required.
12. Records of the equipment leak information required by subsection 4 and the operating information required by subsection 5 need be kept only three years.
13. The owner or operator of any facility with equipment that is subject to sections 33.1-24-05-420 through 33.1-24-05-449 and to the regulations at 40 CFR parts 60, 61, or 63, may elect to determine compliance with sections 33.1-24-05-420 through 33.1-24-05-449 either by documentation pursuant to section 33.1-24-05-434, or by documentation of compliance with the regulations at 40 CFR parts 60, 61, or 63, pursuant to the relevant provisions of the regulations at 40 CFR parts 60, 61, or 63. The documentation of compliance under the regulations at 40 CFR parts 60, 61, or 63 must be kept with or made readily available with the facility operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-435. Reporting requirements.

1. A semiannual report must be submitted by owners and operators subject to the requirements of sections 33.1-24-05-420 through 33.1-24-05-449 to the department by dates specified by the department. The report must include the following information:
- a. The identification number, name, and address of the facility.

- b. For each month during the semiannual reporting period:
- (1) The equipment identification number of each valve for which a leak was not repaired as required in subsection 4 of section 33.1-24-05-427.
- (2) The equipment identification number of each pump for which a leak was not repaired as required in subdivision f of subsection 4 of section 33.1-24-05-422 and subsection 3 of section 33.1-24-05-422.
- (3) The equipment identification number of each compressor for which a leak was not repaired as required in subsection 7 of section 33.1-24-05-423.
- c. Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.
- d. For each month during the semiannual reporting period, dates when the control device installed as required by section 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-424, or 33.1-24-05-425 exceeded or operated outside of the design specifications as defined in subsection 5 of section 33.1-24-05-434 and as indicated by the control device monitoring required by section 33.1-24-05-430 and was not corrected within twenty-four hours, the duration and cause of each exceedance, and any corrective measures taken.
2. If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in subsection 4 of section 33.1-24-05-427, subdivision f of subsection 4 of section 33.1-24-05-422, subsection 3 of section 33.1-24-05-422, and subsection 7 of section 33.1-24-05-423, respectively, and the control device does not exceed or operate outside of the design specifications as defined in subsection 5 of section 33.1-24-05-434 for more than twenty-four hours, a report to the department is not required.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-436. [Reserved]

33.1-24-05-437. [Reserved]

33.1-24-05-438. [Reserved]

33.1-24-05-439. [Reserved]

33.1-24-05-440. [Reserved]

33.1-24-05-441. [Reserved]

33.1-24-05-442. [Reserved]

33.1-24-05-443. [Reserved]

33.1-24-05-444. [Reserved]

33.1-24-05-445. [Reserved]

33.1-24-05-446. [Reserved]

33.1-24-05-447. [Reserved]

33.1-24-05-448. [Reserved]

33.1-24-05-449. [Reserved]

33.1-24-05-450. Applicability to air emission standards for tanks, surface impoundments, and containers.

1. The requirements of sections 33.1-24-05-450 through 33.1-24-05-474 apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either sections 33.1-24-05-89 through 33.1-24-05-129 except as section 33.1-24-05-01 and subsection 2 provide otherwise.
2. The requirements of sections 33.1-24-05-450 through 33.1-24-05-474 do not apply to the following waste management units at the facility:
 - a. A waste management unit that holds hazardous waste placed in the unit before December 6, 1996, and in which no hazardous waste is added to the unit on or after December 6, 1996.
 - b. A container that has a design capacity less than or equal to 26.417 gallons [0.1 meters³].
 - c. A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.
 - d. A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.
 - e. A waste management unit that is used solely for onsite treatment or storage of hazardous waste that is placed in the unit as a result of implementing remedial activities required under the corrective action authorities of Resource Conservation and Recovery Act sections 3004(u), 3004(v), or 3008(h); Comprehensive Environmental Response, Compensation and Liability Act authorities, or similar federal or state authorities.
 - f. A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.
 - g. A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this subdivision, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of subsection 9 of section 33.1-24-05-454, except as provided in subdivision e of subsection 3 of section 33.1-24-05-452.

h. A tank that has a process vent as defined in section 33.1-24-05-401.

3. For the owner and operator of a facility subject to sections 33.1-24-05-450 through 33.1-24-05-474, and who received a final state-issued hazardous waste permit prior to December 6, 1996, the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 shall be incorporated into the permit when the permit is reissued in accordance with the requirements of section 33.1-24-07-11 or reviewed in accordance with the requirements of section 33.1-24-06-06. Until such date when the permit is reissued in accordance with the requirements of section 33.1-24-07-11 or reviewed in accordance with the requirements of section 33.1-24-06-06, the owner and operator are subject to the applicable requirements of subsection 5 of section 33.1-24-06-16.

4. The requirements of sections 33.1-24-05-450 through 33.1-24-05-474, except for the recordkeeping requirements specified in subsection 9 of section 33.1-24-05-459, are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

a. The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this subdivision, "organic peroxide" means an organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

b. The owner or operator prepares documentation, in accordance with the requirements of subsection 9 of section 33.1-24-05-459, explaining why an undue safety hazard would be created if air emission controls specified in sections 33.1-24-05-454 through 33.1-24-05-457 are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of subdivision a.

c. The owner or operator notifies the department in writing that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of subdivision a are managed at the facility in tanks or containers meeting the conditions of subdivision b. The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-451. Definitions.

As used in sections 33.1-24-05-450 through 33.1-24-05-474, all terms shall have the meaning given to them as defined below or as defined elsewhere in this article.

1. "Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of section 33.1-24-05-454.
2. "Closure device" means a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (for example, a sampling port cap), manually operated (for example, a hinged access lid or hatch), or automatically operated (for example, a spring-loaded pressure relief valve).
3. "Continuous seal" means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.
4. "Cover" means a device that provides a continuous barrier over the hazardous waste managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.
5. "Enclosure" means any structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.
6. "External floating roof" means a pontoon or double-deck type cover that rests on the surface of a material managed in a tank with no fixed roof.
7. "Fixed roof" means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.
8. "Floating membrane cover" means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.
9. "Floating roof" means a cover consisting of a double deck, pontoon single deck, or internal floating cover which rests upon and is supported by the material being contained, and is equipped with a continuous seal.
10. "Hard-piping" means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.
11. "In light material service" means the container is used to manage a material for which both of the following conditions apply: The vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals at 20 degrees Celsius; and

the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kilopascals at 20 degrees Celsius is equal to or greater than twenty percent by weight.

12. "Internal floating roof" means a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.

13. "Liquid-mounted seal" means a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank.

14. "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

15. "Maximum organic vapor pressure" means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions (for example, temperature, agitation, pH effects of combining wastes, etc.) reasonably expected to occur in the tank. For the purpose of sections 33.1-24-05-450 through 33.1-24-05-474, maximum organic vapor pressure is determined using the procedures specified in subsection 3 of section 33.1-24-05-453.

16. "Metallic shoe seal" means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

17. "No detectable organic emissions" means no escape of organics to the atmosphere as determined using the procedure specified in subsection 4 of section 33.1-24-05-453.

18. "Point of waste origination" means as follows:

a. When the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a hazardous waste as defined in chapter 33.1-24-02.

[Note: In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63.]

b. When the facility owner and operator are not the generator of the hazardous waste, point of waste origination means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

19. "Point of waste treatment" means the point where a hazardous waste to be treated in accordance with subdivision 6 of subsection 3 of section 33.1-24-05-452 exits the treatment process. Any waste determination shall be made before the waste is conveyed, handled, or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.

20. "Safety device" means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of sections 33.1-24-05-450 through 33.1-24-05-474, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.
21. "Single-seal system" means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.
22. "Vapor-mounted seal" means a continuous seal that is mounted such that there is a vapor space between the hazardous waste in the unit and the bottom of the seal.
23. "Volatile organic concentration" or "VO concentration" means the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million as determined by direct measurement or by knowledge of the waste in accordance with the requirements of section 33.1-24-05-453. For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^6 atmospheres/gram-mole/m³] at 25 degrees Celsius must be included. Appendix VI presents a list of compounds known to have a Henry's law constant value less than the cutoff level.
24. "Waste determination" means performing all applicable procedures in accordance with the requirements of section 33.1-24-05-454 to determine whether a hazardous waste meets standards specified in sections 33.1-24-05-450 through 33.1-24-05-474. Examples of a waste determination include performing the procedures in accordance with the requirements of section 33.1-24-05-454 to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.
25. "Waste stabilization process" means any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9095B (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846 as incorporated by reference in section 33.1-24-01-05. A waste stabilization process includes mixing the hazardous waste with binders or other

materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification". This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-452. Standards - General.

1. This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to sections 33.1-24-05-450 through 33.1-24-05-474.

2. The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in sections 33.1-24-05-454 through 33.1-24-05-457, as applicable to the hazardous waste management unit, except as provided for in subsection 3.

3. A tank, surface impoundment, or container is exempt from standards specified in sections 33.1-24-05-454 through 33.1-24-05-457, as applicable, provided that the waste management unit is one of the following:

a. A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than five hundred parts per million by weight. The average VO concentration shall be determined using the procedures specified in subsection 1 of section 33.1-24-05-453. The owner or operator shall review and update, as necessary, this determination at least once every twelve months following the date of the initial determination for the hazardous waste streams entering the unit.

b. A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(1) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (C_i) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.

(2) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than one hundred parts per million weight. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.

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- (3) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.
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- (4) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:
- (a) The organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent, and the organic biodegradation efficiency (R_{bio}) for the process is equal to or greater than ninety-five percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.
- (b) The total actual organic mass biodegradation rate (MR_{bio}) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.
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- (5) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:
- (a) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in sections 33.1-24-05-454 through 33.1-24-05-457, as applicable to the waste management unit.
- (b) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The department considers a drain system that meets the requirements of 40 CFR part 63, subpart RR - national emission standards for individual drain systems to be a closed system.
- (c) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or five hundred parts per million weight, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in subsection 1 of section 33.1-24-05-453. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in subsection 2 of section 33.1-24-05-453.

- (6) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than ninety-five percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than ten thousand parts per million weight. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination must be determined using the procedures specified in subsections 2 and 1 of section 33.1-24-05-453, respectively.
- (7) A hazardous waste incinerator for which the owner or operator has either:
- (a) Been issued a final permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-144 through 33.1-24-05-159; or
- (b) Has designed and operates the incinerator in accordance with the applicable interim status requirements of subsection 5 of section 33.1-24-06-16.
- (8) A boiler or industrial furnace for which the owner or operator has either:
- (a) Been issued a final permit under chapter 33.1-24-06 which implements the requirements of sections 33.1-24-05-525 through 33.1-24-05-549; or
- (b) Has designed and operates the boiler or industrial furnace in accordance with sections 33.1-24-05-525 through 33.1-24-05-549.
- (9) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of paragraphs 1 through 6, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:
- (a) If method 25D in 40 CFR part 60, appendix A, is used for the analysis, one-half the blank value determined in the method at section 4.4 of method 25D in 40 CFR part 60, appendix A, or a value of twenty-five parts per million by weight, whichever is less.
- (b) If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a _____ Henry's _____ law _____ constant _____ value _____ at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at twenty-five degrees Celsius.
- c. A tank or surface impoundment used for biological treatment of hazardous waste in accordance with the requirements of paragraph 4 of subdivision b.
- d. A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:
- (1) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in sections 33.1-24-05-250

through 33.1-24-05-299 under table "Treatment Standards for Hazardous Waste" in section 33.1-24-05-280; or

(2) The organic hazardous constituents in the waste have been treated by the treatment technology established by the environmental protection agency for the waste in subsection 1 of section 33.1-24-05-282, or have been removed or destroyed by an equivalent method of treatment approved by the environmental protection agency pursuant to subsection 2 of section 33.1-24-05-282.

e. A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

(1) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF - national emission standards for benzene waste operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than ten megagrams per year;

(2) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996; and

(3) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

4. The department may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

a. The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of subsection 1 of section 33.1-24-05-453. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of subsection 2 of section 33.1-24-05-453.

b. In performing a waste determination pursuant to subdivision a, the sample preparation and analysis shall be conducted as follows:

(1) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in paragraph 2.

- (2) If the department determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the department may choose an appropriate method.
- c. In a case when the owner or operator is requested to perform the waste determination, the department may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.
- d. In a case when the results of the waste determination performed or requested by the department do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of subdivision a shall be used to establish compliance with the requirements of sections 33.1-24-05-450 through 33.1-24-05-474.
- e. In a case when the owner or operator has used an averaging period greater than one hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the department may elect to establish compliance with sections 33.1-24-05-450 through 33.1-24-05-474 by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a one-hour period as follows:
- (1) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of subsection 1 of section 33.1-24-05-453.
- (2) Results of the waste determination performed or requested by the department showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than five hundred parts per million weight shall constitute noncompliance with sections 33.1-24-05-450 through 33.1-24-05-474 except in a case as provided for in paragraph 3.
- (3) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than one hour to be less than five hundred parts per million weight but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given one-hour period may be equal to or greater than five hundred parts per million weight, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (for example, test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of subsection 1 of section 33.1-24-05-453 and section 33.1-24-05-459 shall be considered by the department together with the results of the waste determination performed or requested by the department in establishing compliance with sections 33.1-24-05-450 through 33.1-24-05-474.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-453. Waste determination procedures.

1. Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

a. An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of subdivision a of subsection 3 of section 33.1-24-05-452 from using air emission controls in accordance with standards specified in sections 33.1-24-05-454 through 33.1-24-05-457, as applicable to the waste management unit.

(1) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the hazardous waste stream is placed in a waste management unit exempted under the provisions of subdivision a of subsection 3 of section 33.1-24-05-452 from using air emission controls, and thereafter an initial determination of the average VO concentration of the waste stream shall be made for each averaging period that a hazardous waste is managed in the unit; and

(2) Perform a new waste determination whenever changes to the source generating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level that is equal to or greater than the applicable VO concentration limits specified in section 33.1-24-05-452.

b. For a waste determination that is required by subdivision a, the average VO concentration of a hazardous waste at the point of waste origination may be determined using either direct measurement as specified in subdivision c or by knowledge as specified in subdivision d.

c. Direct measurement to determine average VO concentration of a hazardous waste at the point of waste origination.

(1) Identification. The owner or operator shall identify and record the point of waste origination for the hazardous waste.

(2) Sampling. Samples of the hazardous waste stream must be collected at the point of waste origination in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(a) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed one year.

(b) A sufficient number of samples, but no less than four samples, must be collected and analyzed for a hazardous waste determination. All of the samples for a given waste determination shall be collected within a

one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

(c) All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of an acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in method 25D in 40 CFR part 60, appendix A.

(d) Sufficient information, as specified in the "site sampling plan" required under subparagraph c shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the source or process generating the hazardous waste represented by the samples.

(3) Analysis. Each collected sample must be prepared and analyzed in accordance with method 25D in 40 CFR part 60, appendix A, for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/ mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole meters³] at twenty-five degrees Celsius. At the owner's or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at twenty-five degrees Celsius. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at twenty-five degrees Celsius contained in the waste. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in subparagraphs a or b and provided the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X [which can

also be expressed as 1.8x10⁻⁶ atmospheres/gram-mole/m³] at twenty-five degrees Celsius, is met.

(a) Any environmental protection agency standard method that has been validated in accordance with "Alternative Validation Procedure for Environmental Protection Agency Waste and Wastewater Methods", 40 CFR part 63, appendix D.

(b) Any other analysis method that has been validated in accordance with the procedures specified in section 5.1 or 5.3, and the corresponding calculations in section 6.1 or section 6.3, of method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of method 301. If correction is required under section 6.3.3 of method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of method 301 are not required.

(4) Calculations.

(a) The average VO concentration (C) on a mass-weighted basis shall be calculated by using the results for all waste determinations conducted in accordance with paragraphs 2 and 3 and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

\bar{C} = Average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, parts per million weight.

i = Individual waste determination "i" of the hazardous waste.

n = Total number of waste determinations of the hazardous waste conducted (at least four) for the averaging period (not to exceed one year).

Q_i = Mass quantity of hazardous waste stream represented by C_i , kilograms per hour.

Q_T = Total mass quantity of hazardous waste during the averaging period, kilograms per hour.

C_i = Measured VO concentration of waste determination "i" as determined in accordance with the requirements of paragraph 3 (for example, the average of the four or more samples specified in subparagraph b of paragraph 2), parts per million weight.

(b) For the purpose of determining C_i , for individual waste samples analyzed in accordance with paragraph 3, the owner or operator shall account for

VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

[1] If method 25D in 40 CFR part 60, appendix A, is used for the analysis, one-half the blank value determined in the method at section 4.4 of method 25D in 40 CFR part 60, appendix A.

[2] If any other analytical method is used, one-half the sum of the limits of detection established for each organic constituent in the waste that has a Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/ mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at twenty-five degrees Celsius.

(5) Provided that the test method is appropriate for the waste as required under paragraph 3, the department will determine compliance based on the test method used by the owner or operator as recorded pursuant to subsection 6 of section 33.1-24-05-459.

d. Use of owner or operator knowledge to determine average VO concentration of a hazardous waste at the point of waste origination.

(1) Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the hazardous waste stream's average VO concentration. Examples of information that may be used as the basis for knowledge include material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.

(2) If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, an owner or operator may use organic concentration test data for the hazardous waste stream that are validated in accordance with method 301 in 40 CFR part 63, appendix A, as the basis for knowledge of the waste.

(3) An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data to the corresponding average VO concentration value which would have been obtained had the waste samples been analyzed using method 25D and 40 CFR part 60, appendix A. To adjust these data, the measured concentration for each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}).

(4) In the event that the department and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream

using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in subdivision c must be used to establish compliance with the applicable requirements in sections 33.1-24-05-450 through 33.1-24-05-474. The department may perform or request that the owner or operator perform this determination using direct measurement. The owner or operator may choose one or more appropriate methods to analyze each collected sample in accordance with the requirements of paragraph 3 of subdivision c.

2. Waste determination procedures for treated hazardous waste.

a. An owner or operator shall perform the applicable waste determinations for each treated hazardous waste placed in waste management units exempted under the provisions of paragraphs 1 through 6 of subdivision b of subsection 3 of section 33.1-24-05-452 from using air emission controls in accordance with standards specified in sections 33.1-24-05-454 through 33.1-24-05-457, as applicable to the waste management unit.

(1) An initial determination of the average VO concentration of the waste stream shall be made before the first time any portion of the material in the treated waste stream is placed in the exempt waste management unit, and thereafter update the information used for the waste determination at least once every twelve months following the date of the initial waste determination; and

(2) Perform a new waste determination whenever changes to the process generating or treating the waste stream are reasonably likely to cause the average VO concentration of the hazardous waste to increase to a level such that the applicable treatment conditions specified in subdivision b of subsection 3 of section 33.1-24-05-452 are not achieved.

b. The waste determination for a treated hazardous waste must be performed in accordance with the procedures specified in subdivisions c through j, as applicable to the treated hazardous waste.

c. The owner or operator shall designate and record the specific provision in subdivision b of subsection 3 of section 33.1-24-05-452 under which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed using the applicable procedures specified in subdivisions d through j.

d. Procedure to determine the average VO concentration of a hazardous waste at the point of waste treatment.

(1) Identification. The owner or operator shall identify and record the point of waste treatment for the hazardous waste.

(2) Sampling. Samples of the hazardous waste stream must be collected at the point of waste treatment in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(a) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis must be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed one.

(b) A sufficient number of samples, but no less than four samples, must be collected and analyzed for a hazardous waste determination. All of the samples for a given waste determination shall be collected within a one-hour period. The average of the four or more sample results constitutes a waste determination for the waste stream. One or more waste determinations may be required to represent the complete range of waste compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the process generating or treating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

(c) All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in method 25D in 40 CFR part 60, appendix A.

(d) Sufficient information, as specified in the "site sampling plan" required under subparagraph c shall be prepared and recorded to document the waste quantity represented by the samples and, as applicable, the operating conditions for the process treating the hazardous waste represented by the samples.

(3) Analysis. Each collected sample must be prepared and analyzed in accordance with method 25D in 40 CFR part 60, appendix A, for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/ mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole meters³] at twenty-five degrees Celsius. When the owner or operator is making a waste determination for a treated hazardous waste that is to be compared to an average VO concentration at the point of waste origination or the point of waste entry to the treatment system to determine if the conditions of paragraphs 1 through 6 of subdivision b of subsection 3 of section 33.1-24-05-452 are met, then the waste samples shall be prepared and analyzed using the same method or methods as were used in making the initial waste determinations at the point of waste origination or at the point of entry to the

treatment system. At the owner's or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value less than 0.1 Y/X at twenty-five degrees Celsius. To adjust these data the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at twenty-five degrees Celsius contained in the waste. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in subparagraph a or b of paragraph 3 of subdivision c of subsection 1 and provided the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/ m^3] at twenty-five degrees Celsius, is met.

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- (a) Any environmental protection agency standard method that has been validated in accordance with "Alternative Validation Procedure for Environmental Protection Agency Waste and Wastewater Methods", 40 CFR part 63, appendix D.
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- (b) Any other analysis method that has been validated in accordance with the procedures specified in section 5.1 or 5.3 and the corresponding calculations in section 6.1 or section 6.3 of method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in section 6.1.5 or 6.3.3 of method 301. If correction is required under section 6.3.3 of method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of method 301 are not required.
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- (4) Calculations. The average VO concentration (C) on a mass-weighted basis must be calculated by using the results for all waste determinations conducted in accordance with paragraphs 2 and 3 and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^n (Q_i \times C_i)$$

where:

\bar{C} = Average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, parts per million weight.

i = Individual waste determination "i" of the hazardous waste.

n = Total number of waste determinations of the hazardous waste conducted for the averaging period (not to exceed one year).

Q_i = Mass quantity of hazardous waste stream represented by C_i , kilograms per hour.

Q_T = Total mass quantity of hazardous waste during the averaging period, kilograms per hour.

C_i = Measured VO concentration of waste determination "i" as determined in accordance with the requirements of paragraph 3 (for example, the average of the four or more samples specified in subparagraph b of paragraph 2), parts per million weight.

(5) Provided that the test method is appropriate for the waste as required under paragraph 3, compliance shall be determined based on the test method used by the owner or operator as recorded pursuant to subdivision a of subsection 6 of section 33.1-24-05-459.

e. Procedure to determine the exit concentration limit (C_t) for a treated hazardous waste.

(1) The point of waste origination for each hazardous waste treated by the process at the same time must be identified.

(2) If a single hazardous waste stream is identified in paragraph 1, then the exit concentration limit (C_t) must be five hundred parts per million weight.

(3) If more than one hazardous waste stream is identified in paragraph 1, then the average VO concentration of each hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of subsection 1. The exit concentration limit (C_t) must be calculated by using the results determined for each individual hazardous waste stream and the following equation:

$$C_t = \frac{\sum_{x=1}^m (Q_x \times C_x) + \sum_{y=1}^n (Q_y \times 500 \text{ ppmw})}{\sum_{x=1}^m Q_x + \sum_{y=1}^n Q_y}$$

where:

C_t = Exit concentration limit for treated hazardous waste, parts per million weight.

x = Individual hazardous waste stream "x" that has an average VO concentration less than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of subsection 1.

y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of subsection 1.

m = Total number of "x" hazardous waste streams treated by process.

n = Total number of "y" hazardous waste streams treated by process.

Q_x = Annual mass quantity of hazardous waste stream "x", kilograms per year.

Q_y = Annual mass quantity of hazardous waste stream "y", kilograms per year.

C_x = Average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of subsection 1, parts per million weight.

f. Procedure to determine the organic reduction efficiency (R) for a treated hazardous waste.

(1) The organic reduction efficiency (R) for a treatment process must be determined based on results for a minimum of three consecutive runs.

(2) All hazardous waste streams entering the treatment process and all hazardous waste streams exiting the treatment process must be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.

(3) For each run, information must be determined for each hazardous waste stream identified in paragraph 2 using the following procedures:

(a) The mass quantity of each hazardous waste stream entering the process (Q_b) and the mass quantity of each hazardous waste stream exiting the process (Q_a) must be determined.

(b) The average VO concentration at the point of waste origination of each hazardous waste stream entering the process (C_b) during the run must be determined in accordance with the requirements of subdivision c of subsection 1. The average VO concentration at the point of waste treatment of each waste stream exiting the process (C_a) during the run must be determined in accordance with the requirements of subdivision d.

(4) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) must be calculated by using the results determined in accordance with paragraph 3 and the following equations:

$$E_{b=\frac{1}{10^6}} \sum_{j=1}^m (Q_{bj} \times \overline{C_{bj}})$$

$$E_{a=\frac{1}{10^6}} \sum_{j=1}^m (Q_{aj} \times \overline{C_{aj}})$$

where:

E_a = Waste volatile organic mass flow exiting process, kilograms per hour.

E_b = Waste volatile organic mass flow entering process, kilograms per hour.

m = Total number of runs (at least three).

j = Individual run "j".

Q_{bj} = Mass quantity of hazardous waste entering process during run "j", kilograms per hour.

Q_{aj} = Average mass quantity of hazardous waste exiting process during run "j", kilograms per hour.

C_{aj} = Average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of subdivision d, parts per million weight.

C_{bj} = Average VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of subdivision c of subsection 1, parts per million weight.

- (5) The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with paragraph 4 and the following equation:

$$R = \frac{(E_b - E_a)}{E_b} \times 100\%$$

where:

R = Organic reduction efficiency, percent.

E_b = Waste volatile organic mass flow entering process as determined in accordance with the requirements of paragraph 4, kilograms per hour.

E_a = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of paragraph 4, kilograms per hour.

- g. Procedure to determine the organic biodegradation efficiency (R_{bio}) for a treated hazardous waste.

(1) The fraction of organics biodegraded (F_{bio}) must be determined using the procedure specified in 40 CFR part 63, appendix C.

(2) The R_{bio} must be calculated by using the following equation:

$$R_{bio} \times F_{bio} \times 100\%$$

where:

R_{bio} = Organic biodegradation efficiency, percent.

F_{bio} = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph 1.

h. Procedure to determine the required organic mass removal rate (RMR) for a treated hazardous waste.

- (1) All of the hazardous waste streams entering the treatment process must be identified.
- (2) The average VO concentration of each hazardous waste stream at the point of waste origination must be determined in accordance with the requirements of subsection 1.
- (3) For each individual hazardous waste stream that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination, the average volumetric flow rate and the density of the hazardous waste stream at the point of waste origination must be determined.
- (4) The RMR must be calculated by using the average VO concentration, average volumetric flow rate, and density determined for each individual hazardous waste stream, and the following equation:

$$RMR = \sum_{y=1}^n \left[V_y \times K_y \times \frac{\bar{C}_y - 500 \text{ ppmw}}{10^6} \right]$$

where:

RMR = Required organic mass removal rate, kilograms per hour.

y = Individual hazardous waste stream "y" that has an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination as determined in accordance with the requirements of subsection 1.

n = Total number of "y" hazardous waste streams treated by process.

V_y = Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, meters³ per hour.

K_y = Density of hazardous waste stream, "y", kilograms per meters³.

C_y = Average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of subsection 1, parts per million weight.

i. Procedure to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

- (1) The MR shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.

(2) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) must be determined in accordance with the requirements of paragraph 4 of subdivision f.

(3) The MR must be calculated by using the mass flow rate determined in accordance with the requirements paragraph 2 and the following equation:

$$\underline{MR = E_b - E_a}$$

where:

MR = Actual organic mass removal rate, kilograms per hour.

E_b = Waste volatile organic mass flow entering process as determined in accordance with the requirements of of paragraph 4 of subdivision f, kilograms per hour.

E_a = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of of paragraph 4 of subdivision f, kilograms per hour.

j. Procedure to determine the actual organic mass biodegradation rate (MR_{bio}) for a treated hazardous waste.

(1) The MR_{bio} must be determined based on results for a minimum of three consecutive runs. The sampling time for each run must be one hour.

(2) The waste organic mass flow entering the process (E_b) must be determined in accordance with the requirements of paragraph 4 of subdivision f.

(3) The fraction of organic biodegraded (F_{bio}) must be determined using the procedure specified in 40 CFR part 63, appendix C.

(4) The MR_{bio} must be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with the requirements of paragraphs 2 and 3, respectively, and the following equation:

$$\underline{MR_{bio} = E_b \times F_{bio}}$$

where:

MR_{bio} = Actual organic mass biodegradation rate, kilograms per hour.

E_b = Waste organic mass flow entering process as determined in accordance with the requirements of of paragraph 4 of subdivision f, kilograms per hour.

F_{bio} = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph 3.

3. Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

- a. An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using tank level 1 controls in accordance with standards specified in subsection 3 of section 33.1-24-05-454.
- b. The maximum organic vapor pressure of the hazardous waste may be determined using either direct measurement as specified in subdivision c or knowledge of the waste as specified in subdivision d to determine the maximum organic vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.
- c. Direct measurement to determine the maximum organic vapor pressure of a hazardous waste.
 - (1) Sampling. A sufficient number of samples must be collected to be representative of the waste contained in the tank. All samples must be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan must describe the procedure by which representative samples of the hazardous waste are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan must be maintained onsite in the facility operating records. An example of acceptable sample collection and handling procedures may be found in method 25D in 40 CFR part 60, appendix A.
 - (2) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:
 - (a) Method 25E in 40 CFR part 60, appendix A;
 - (b) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks", as incorporated by reference in section 33.1-24-01-05;
 - (c) Methods obtained from the standard reference texts;
 - (d) ASTM method 2879-92, as incorporated by reference in section 33.1-24-01-05; or
 - (e) Any other method approved by the department.
- d. Use of knowledge to determine the maximum organic vapor pressure of the hazardous waste. Documentation must be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in paragraph 1 of subdivision a of subsection 2 of section 33.1-24-05-454 for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor

pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

4. The procedure for determining no detectable organic emissions for the purpose of complying with sections 33.1-24-05-450 through 33.1-24-05-474 must be conducted in accordance with the procedures specified below:

a. The test must be conducted in accordance with the procedures specified in method 21 of 40 CFR part 60, appendix A. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the cover and associated closure devices must be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: the interface of the cover and its foundation mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

b. The test must be performed when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test, the cover and closure devices must be secured in the closed position.

c. The detection instrument must meet the performance criteria of method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of method 21 must be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.

d. The detection instrument must be calibrated before use on each day of its use by the procedures specified in method 21 of 40 CFR part 60, appendix A.

e. Calibration gases must be as follows:

(1) Zero air (less than ten parts per million volume hydrocarbon in air); and

(2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, ten thousand parts per million volume methane or n-hexane.

f. The background level must be determined according to the procedures in method 21 of 40 CFR part 60, appendix A.

g. Each potential leak interface must be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface must be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (for example, some pressure relief devices), the instrument probe inlet must be placed at approximately the center of the exhaust area to the atmosphere.

h. The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of five hundred parts per million volume except when monitoring a seal around a

rotating shaft that passes through a cover opening, in which case the comparison must be as specified in subdivision i. If the difference is less than five hundred parts per million volume, then the potential leak interface is determined to operate with no detectable organic emissions.

- i. For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level must be compared with the value of ten thousand parts per million weight. If the difference is less than ten thousand parts per million weight, then the potential leak interface is determined to operate with no detectable organic emissions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-454. Standards - Tanks.

1. The provisions of this section apply to the control of air pollutant emissions from tanks for which subsection 2 of section 33.1-24-05-452 references the use of this section for such air emission control.
2. The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:
 - a. For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs 1 through 3, the owner or operator shall control air pollutant emissions from the tank in accordance with the tank level 1 controls specified in subsection 3 or the tank level 2 controls specified in subsection 4.
 - (1) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:
 - (a) For a tank design capacity equal to or greater than 5,330 feet³ [151 meters³], the maximum organic vapor pressure limit for the tank is 5.2 kilopascals.
 - (b) For a tank design capacity equal to or greater than 2,650 feet³ [75 meters³] but less than 5,330 feet³ [151 meters³], the maximum organic vapor pressure limit for the tank is 27.6 kilopascals.
 - (c) For a tank design capacity less than 2,650 feet³ [75 meters³], the maximum organic vapor pressure limit for the tank is 76.6 kilopascals.
 - (2) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with paragraph 1.
 - (3) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in section 33.1-24-05-451.

b. For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs 1 through 3 of subdivision a, the owner or operator shall control air pollutant emissions from the tank by using tank level 2 controls in accordance with the requirements of subsection 4. Examples of tanks required to use tank level 2 controls include a tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph 1 of subdivision a.

3. Owners and operators controlling air pollutant emissions from a tank using tank level 1 controls shall meet the requirements specified in subdivisions a through d:

a. The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using tank level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure must be determined using the procedures specified in subsection 3 of section 33.1-24-05-453. Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph 1 of subdivision a of subsection 2, as applicable to the tank.

b. The tank must be equipped with a fixed roof designed to meet the following specifications:

(1) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (for example, a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (for example, a horizontal cylindrical tank equipped with a hatch).

(2) The fixed roof must be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(3) Each opening in the fixed roof, and any manifold system associated with the fixed roof, must be either:

(a) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(b) Connected by a closed-vent system that is vented to a control device. The control device must remove or destroy organics in the vent stream, and must be operating whenever hazardous waste is managed in the tank, except as provided for in items 1 and 2.

[1] During periods when it is necessary to provide access to the tank for performing the activities of item 2, venting of the vapor headspace underneath the fixed roof to the control device is not

required, opening of closure devices is allowed, and removal of the fixed roof is allowed. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, and resume operation of the control device.

[2] During periods of routine inspection, maintenance, or other activities needed for normal operations, and for removal of accumulated sludge or other residues from the bottom of the tank.

(4) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

c. Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position except as follows:

(1) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(b) To remove accumulated sludge or other residues from the bottom of the tank.

(2) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device must be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens must be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal

pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(3) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The owner or operator shall inspect the air emission control equipment in accordance with the following requirements:

(1) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in subsection 12.

(3) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.

(4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-05-459.

4. Owners and operators controlling air pollutant emissions from a tank using tank level 2 controls shall use one of the following tanks:

a. A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in subsection 5;

b. A tank equipped with an external floating roof in accordance with the requirements specified in subsection 6;

c. A tank vented through a closed-vent system to a control device in accordance with the requirements specified in subsection 7;

d. A pressure tank designed and operated in accordance with the requirements specified in subsection 8; or

e. A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in subsection 9.

5. The owner or operator who controls air pollutant emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirements specified in subdivisions a through c.

a. The tank must be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

- (1) The internal floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.
 - (2) The internal floating roof must be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:
 - (a) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in section 33.1-24-05-451; or
 - (b) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.
 - (3) The internal floating roof must meet the following specifications:
 - (a) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
 - (b) Each opening in the internal floating roof must be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.
 - (c) Each penetration of the internal floating roof for the purpose of sampling must have a slit fabric cover that covers at least ninety percent of the opening.
 - (d) Each automatic bleeder vent and rim space vent must be gasketed.
 - (e) Each penetration of the internal floating roof that allows for passage of a ladder must have a gasketed sliding cover.
 - (f) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof must have a flexible fabric sleeve seal or a gasketed sliding cover.
- b. The owner or operator shall operate the tank in accordance with the following requirements:
- (1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and must be completed as soon as practical.
 - (2) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.
 - (3) Prior to filling the tank, each cover, access hatch, gauge float well, or lid on any opening in the internal floating roof must be bolted or fastened closed (for example, no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

c. The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

(1) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to the internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than ten percent open area.

(2) The owner or operator shall inspect the internal floating roof components as follows except as provided in paragraph 3:

(a) Visually inspect the internal floating roof components through openings on the fixed roof (for example, manholes and roof hatches) at least once every twelve months after initial fill; and

(b) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every ten years.

(3) As an alternative to performing the inspection specified in paragraph 2 for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every five years.

(4) Prior to each inspection required by paragraph 2 or 3, the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:

(a) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before refilling the tank except when an inspection is not planned as provided for in subparagraph b.

(b) When a visual inspection is not planned and the owner or operator could not have known about the inspection thirty calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.

- (5) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
- (6) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-05-459.
- d. Safety devices, as defined in section 33.1-24-05-451, may be installed and operated as necessary on any tank complying with the requirements of this subsection.
6. The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in subdivisions a through c.
- a. The owner or operator shall design the external floating roof in accordance with the following requirements:
- (1) The external floating roof must be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.
- (2) The floating roof must be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.
- (a) The primary seal must be a liquid-mounted seal or a metallic shoe seal, as defined in section 33.1-24-05-451. The total area of the gaps between the tank wall and the primary seal may not exceed 10.0 inches² per foot [212 square centimeters per meter] of tank diameter, and the width of any portion of these gaps may not exceed 1.5 inches [3.8 centimeters]. If a metallic shoe seal is used for the primary seal, the metallic shoe seal must be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least sixty-one centimeters above the liquid surface.
- (b) The secondary seal must be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal may not exceed 1.0 inches² per foot [21.2 square centimeters per meter] of tank diameter, and the width of any portion of these gaps must not exceed 0.5 inches [1.3 centimeters].
- (3) The external floating roof must meet the following specifications:
- (a) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof must provide a projection below the liquid surface.
- (b) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be equipped with a gasketed cover, seal, or lid.

- (c) Each access hatch and each gauge float well must be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.
 - (d) Each automatic bleeder vent and each rim space vent must be equipped with a gasket.
 - (e) Each roof drain that empties into the liquid managed in the tank must be equipped with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening.
 - (f) Each unslotted and slotted guide pole well must be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.
 - (g) Each unslotted guide pole must be equipped with a gasketed cap on the end of the pole.
 - (h) Each slotted guide pole must be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.
 - (i) Each gauge hatch and each sample well must be equipped with a gasketed cover.
- b. The owner or operator shall operate the tank in accordance with the following requirements:
- (1) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling must be continuous and must be completed as soon as practical.
 - (2) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof must be secured and maintained in a closed position at all times except when the closure device must be open for access.
 - (3) Covers on each access hatch and each gauge float well must be bolted or fastened when secured in the closed position.
 - (4) Automatic bleeder vents must be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.
 - (5) Rim space vents must be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.
 - (6) The cap on the end of each unslotted guide pole must be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.
 - (7) The cover on each gauge hatch or sample well must be secured in the closed position at all times except when the hatch or well must be opened for access.

(8) Both the primary seal and the secondary seal must completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

c. The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:

(1) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(a) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every five years.

(b) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within sixty calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(c) If a tank ceases to hold hazardous waste for a period of one year or more, subsequent introduction of hazardous waste into the tank must be considered an initial operation for the purposes of subparagraphs a and b.

(d) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

[1] The seal gap measurements must be performed at one or more floating roof levels when the roof is floating off the roof supports.

[2] Seal gaps, if any, must be measured around the entire perimeter of the floating roof in each place where a 0.125-inch [0.32-centimeter] diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

[3] For a seal gap measured under this subdivision, the gap surface area must be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

[4] The total gap area must be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal diameter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in paragraph 2 of subdivision a.

(e) If the seal gap measurements do not conform to the specifications in paragraph 2 of subdivision a, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.

(f) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-05-459.

(2) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(a) The floating roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(b) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.

(c) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.

(d) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-05-459.

(3) Prior to each inspection required by paragraph 1 or 2, the owner or operator shall notify the department in advance of each inspection to provide the department with the opportunity to have an observer present during the inspection. The owner or operator shall notify the department of the date and location of the inspection as follows:

(a) Prior to each inspection to measure external floating roof seal gaps as required under paragraph 1, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before the date the measurements are scheduled to be performed.

(b) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification must be prepared and sent by the owner or operator so that it is received by the department at least thirty calendar days before refilling the tank except when an inspection is not planned as provided for in subparagraph c.

- (c) When a visual inspection is not planned and the owner or operator could not have known about the inspection thirty calendar days before refilling the tank, the owner or operator shall notify the department as soon as possible, but no later than seven calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the department at least seven calendar days before refilling the tank.
- d. Safety devices, as defined in section 33.1-24-05-451, may be installed and operated as necessary on any tank complying with the requirements of this subsection.
7. The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in subdivisions a through c.
- a. The tank must be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:
- (1) The fixed roof and its closure devices must be designed to form a continuous barrier over the entire surface area of the liquid in the tank.
- (2) Each opening in the fixed roof not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions.
- (3) The fixed roof and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices include organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.
- (4) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33.1-24-05-457.
- b. Whenever a hazardous waste is in the tank, the fixed roof must be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

- (1) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:
 - (a) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.
 - (b) To remove accumulated sludge or other residues from the bottom of a tank.
- (2) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.
- c. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:
 - (1) The fixed roof and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.
 - (2) The closed-vent system and control device must be inspected and monitored by the owner or operator in accordance with the procedures specified in section 33.1-24-05-457.
 - (3) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 12.
 - (4) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 11.
 - (5) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 2 of section 33.1-24-05-459.
- 8. The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements:
 - a. The tank must be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.
 - b. All tank openings must be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in subsection 4 of section 33.1-24-05-453.

- c. Whenever a hazardous waste is in the tank, the tank must be operated as a closed system that does not vent to the atmosphere except under either of the following conditions as specified in paragraph 1 or 2:
 - (1) At those times when opening of a safety device, as defined in section 33.1-24-05-451, is required to avoid an unsafe condition.
 - (2) At those times when purging of inerts from the tank is required and the purge stream is routed to a closed-vent system and control device designed and operated in accordance with the requirements of section 33.1-24-05-457.
- 9. The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in subdivisions a through d.
 - a. The tank must be located inside an enclosure. The enclosure must be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.
 - b. The enclosure must be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in section 33.1-24-05-457.
 - c. Safety devices, as defined in section 33.1-24-05-451, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of subdivisions a and b.
 - d. The owner or operator shall inspect and monitor the closed-vent system and control device as specified in section 33.1-24-05-457.
- 10. The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:
 - a. Transfer of hazardous waste, except as provided in subdivision b, to the tank from another tank subject to this section or from a surface impoundment subject to section 33.1-24-05-455 must be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR - National Emission Standards for Individual Drain Systems.
 - b. The requirements of subdivision a do not apply when transferring a hazardous waste to the tank under any of the following conditions:

- (1) The hazardous waste meets the average VO concentration conditions specified in subdivision a of subsection 3 of section 33.1-24-05-452 at the point of waste origination.
 - (2) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in subdivision b of subsection 3 of section 33.1-24-05-452.
 - (3) The hazardous waste meets the requirements of subdivision d of subsection 3 of section 33.1-24-05-452.
11. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of subdivision d of subsection 3, subdivision c of subsection 5, subdivision c of subsection 6, or subdivision c of subsection 7 as follows:
- a. The owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection, and repair shall be completed as soon as possible but no later than forty-five calendar days after detection except as provided in subdivision b.
 - b. Repair of a defect may be delayed beyond forty-five calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.
12. Following the initial inspection and monitoring of the cover as required by the applicable provisions of sections 33.1-24-05-450 through 33.1-24-05-474, subsequent inspection and monitoring may be performed at intervals longer than one year under the following special conditions:
- a. If inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:
 - (1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.
 - (2) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of sections 33.1-24-05-450 through 33.1-24-05-474, as frequently as practicable during those times when a worker can safely access the cover.
 - b. If a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (for example, fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-455. Standards - Surface impoundments.

1. The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which subsection 2 of section 33.1-24-05-452 references the use of this section for such air emission control.
2. The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:
 - a. A floating membrane cover in accordance with the provisions specified in subsection 3; or
 - b. A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in subsection 4.
3. The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in subdivisions a through c.
 - a. The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:
 - (1) The floating membrane cover must be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.
 - (2) The cover shall be fabricated from a synthetic membrane material that is either:
 - (a) High density polyethylene with a thickness no less than 0.1 inches [2.5 millimeters]; or
 - (b) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in subparagraph a and chemical and physical properties that maintain the material integrity for the intended service life of the material.
 - (3) The cover must be installed so there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.
 - (4) Except as provided for in paragraph 5, each opening in the floating membrane cover must be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.
 - (5) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be

equipped with a slotted membrane fabric cover that covers at least ninety percent of the area of the opening or a flexible fabric sleeve seal.

(6) The closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices include organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

b. Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(1) Opening of closure devices or removal of the cover is allowed at the following times:

(a) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

(b) To remove accumulated sludge or other residues from the bottom of a surface impoundment.

(2) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

c. The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

(1) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 7.

- (3) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 6.
- (4) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 3 of section 33.1-24-05-459.
4. The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in subdivisions a through c.
- a. The surface impoundment must be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:
- (1) The cover and its closure devices must be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.
- (2) Each opening in the cover not vented to the control device must be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices must be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device must be designed to operate with no detectable organic emissions using the procedure specified in subsection 4 of section 33.1-24-05-453.
- (3) The cover and its closure devices must be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.
- (4) The closed-vent system and control device must be designed and operated in accordance with the requirements of section 33.1-24-05-457.
- b. Whenever a hazardous waste is in the surface impoundment, the cover must be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:
- (1) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:
- (a) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment.

or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(b) To remove accumulated sludge or other residues from the bottom of the surface impoundment.

(2) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

c. The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(1) The surface impoundment cover and its closure devices must be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(2) The closed-vent system and control device must be inspected and monitored by the owner or operator in accordance with the procedures specified in section 33.1-24-05-457.

(3) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in subsection 7.

(4) If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of subsection 6.

(5) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in subsection 3 of section 33.1-24-05-459.

5. The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:

a. Transfer of hazardous waste, except as provided in subdivision b, to the surface impoundment from another surface impoundment subject to this section or from a tank subject to section 33.1-24-05-454 must be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR - National Emission Standards for Individual Drain Systems.

b. The requirements of subdivision a do not apply when transferring a hazardous waste to the surface impoundment under any of the following conditions:

- (1) The hazardous waste meets the average VO concentration conditions specified in subdivision a of subsection 3 of section 33.1-24-05-452 at the point of waste origination.
 - (2) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in subdivision b of subsection 3 of section 33.1-24-05-452.
 - (3) The hazardous waste meets the requirements of subdivision d of subsection 3 of section 33.1-24-05-452.
6. The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of subdivision c of subsection 3 or subdivision c of subsection 4 as follows:
- a. The owner or operator shall make first efforts at repair of the defect no later than five calendar days after detection and repair shall be completed as soon as possible but no later than forty-five calendar days after detection except as provided in subdivision b.
 - b. Repair of a defect may be delayed beyond forty-five calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect must be completed before the process or unit resumes operation.
7. Following the initial inspection and monitoring of the cover as required by the applicable provisions of sections 33.1-24-05-450 through 33.1-24-05-474, subsequent inspection and monitoring may be performed at intervals longer than one year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:
- a. Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.
 - b. Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of sections 33.1-24-05-450 through 33.1-24-05-474 as frequently as practicable during those times when a worker can safely access the cover.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-456. Standards - Containers.

1. The provisions of this section apply to the control of air pollutant emissions from containers for which subsection 2 of section 33.1-24-05-452 references the use of this section for such air emission control.

2. General requirements.

a. The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in subdivision b apply to the container.

(1) For a container having a design capacity greater than 3.5 feet³ [0.1 meter³] and less than or equal to 16.25 feet³ [0.46 meter³], the owner or operator shall control air pollutant emissions from the container in accordance with the container level 1 standards specified in subsection 3.

(2) For a container having a design capacity greater than 16.25 feet³ [0.46 meter³] that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 1 standards specified in subsection 3.

(3) For a container having a design capacity greater than 16.25 feet³ [0.46 meter³] that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 2 standards specified in subsection 4.

b. When a container having a design capacity greater than 3.5 feet³ [0.1 meter³] is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the container level 3 standards specified in subsection 5 at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

3. Container level 1 standards.

a. A container using container level 1 controls is one of the following:

(1) A container that meets the applicable department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.

(2) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (for example, a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (for example, a "portable tank" or bulk cargo container equipped with a screw-type cap).

(3) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

b. A container used to meet the requirements of paragraph 2 or 3 of subdivision a must be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall only include organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

c. Whenever a hazardous waste is in a container using container level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(a) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(a) For the purpose of meeting the requirements of this section, an empty container as defined in subsections 3, 4, and 5 of section 33.1-24-02-07 may be open to the atmosphere at any time (for example, covers and closure devices are not required to be secured in the closed position on an empty container).

(b) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in subsections 3, 4, and 5 of section 33.1-

24-02-07, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The owner or operator of containers using container level 1 controls shall inspect the containers and their covers and closure devices as follows:

(1) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within twenty-four hours after the container is accepted at the facility (for example, does not meet the conditions for an empty container as specified in subsections 3, 4, and 5 of section 33.1-24-02-07), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33.1-24-05-450 through 33.1-24-05-474). For purposes

of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on item 20 of the uniform hazardous waste manifest in appendix I to chapter 33.1-24-03 (environmental protection agency forms 8700-22 and 8700-22A), as required by section 33.1-24-05-38. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.

(2) In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.

(3) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than twenty-four hours after detection and repair shall be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

e. The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 16.25 feet³ [0.46 meter³] or greater, which do not meet applicable department of transportation regulations as specified in subsection 6, are not managing hazardous waste in light material service.

4. Container level 2 standards.

a. A container using container level 2 controls is one of the following:

(1) A container that meets the applicable department of transportation regulations on packaging hazardous materials for transportation as specified in subsection 6.

(2) A container that operates with no detectable organic emissions as defined in section 33.1-24-05-451 and determined in accordance with the procedure specified in subsection 7.

(3) A container that has been demonstrated within the preceding twelve months to be vapor-tight by using 40 CFR part 60, appendix A, method 27 in accordance with the procedure specified in subsection 8.

b. Transfer of hazardous waste in or out of a container using container level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this subdivision include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container;

a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

c. Whenever a hazardous waste is in a container using container level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(1) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(a) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(b) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within fifteen minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(2) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(a) For the purpose of meeting the requirements of this section, an empty container as defined in subsections 3, 4, and 5 of section 33.1-24-02-07 may be open to the atmosphere at any time (for example, covers and closure devices are not required to be secured in the closed position on an empty container).

(b) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in subsections 3, 4, and 5 of section 33.1-24-02-07, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within fifteen minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(3) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access

equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(4) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(5) Opening of a safety device, as defined in section 33.1-24-05-451, is allowed at any time conditions require doing so to avoid an unsafe condition.

d. The owner or operator of containers using container level 2 controls shall inspect the containers and their covers and closure devices as follows:

(1) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied within twenty-four hours after the container is accepted at the facility (for example, does not meet the conditions for an empty container as specified in subsections 3, 4, and 5 of section 33.1-24-02-07), the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. The container visual inspection shall be conducted on or before the date that the container is accepted at the facility (for example, the date the container becomes subject to the container standards in sections 33.1-24-05-450 through 33.1-24-05-474). For purposes of this requirement, the date of acceptance is the date of signature that the facility owner or operator enters on item 20 of the uniform hazardous waste manifest in appendix I to chapter 33.1-24-03 (environmental protection agency forms 8700-22 and 8700-22A), as required by section 33.1-24-05-38. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.

(2) In the case when a container used for managing hazardous waste remains at the facility for a period of one year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every twelve months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure

devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph 3.

- (3) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than twenty-four hours after detection, and repair shall be completed as soon as possible but no later than five calendar days after detection. If repair of a defect cannot be completed within five calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

5. Container level 3 standards.

- a. A container using container level 3 controls is one of the following:

- (1) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph 2 of subdivision b.
- (2) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs 1 and 2 of subdivision b.

- b. The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

- (1) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in section 5.0 to "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

- (2) The closed-vent system and control device shall be designed and operated in accordance with the requirements of section 33.1-24-05-457.

- c. Safety devices, as defined in section 33.1-24-05-451, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of subdivision a.

- d. Owners and operators using container level 3 controls in accordance with the provisions of sections 33.1-24-05-450 through 33.1-24-05-474 shall inspect and monitor the closed-vent systems and control devices as specified in section 33.1-24-05-457.

- e. Owners and operators that use container level 3 controls in accordance with the provisions of sections 33.1-24-05-450 through 33.1-24-05-474 shall prepare and maintain the records specified in subsection 4 of section 33.1-24-05-459.

- f. Transfer of hazardous waste in or out of a container using container level 3 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the department considers to meet the requirements of this subdivision include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.
- 6. For the purpose of compliance with paragraph 1 of subdivision a of subsection 3 or paragraph 1 of subdivision a of subsection 4, containers shall be used that meet the applicable department of transportation regulations on packaging hazardous materials for transportation as follows:
 - a. The container meets the applicable requirements specified in 49 CFR part 178 - Specifications for Packaging or 49 CFR part 179 - Specifications for Tank Cars.
 - b. Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B - Exemptions; 49 CFR part 172 - Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173 - Shippers - General Requirements for Shipments and Packages; and 49 CFR part 180 - Continuing Qualification and Maintenance of Packagings.
 - c. For the purpose of complying with sections 33.1-24-05-450 through 33.1-24-05-474, no exceptions to the 49 CFR part 178 or 179 regulations are allowed except as provided for in subdivision d.
 - d. For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with sections 33.1-24-05-450 through 33.1-24-05-474, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).
- 7. To determine compliance with the no detectable organic emissions requirement of paragraph 2 of subdivision a of subsection 4, the procedure specified in subsection 4 of section 33.1-24-05-453 shall be used.
 - a. Each potential leak interface (for example, a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to, the interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.
 - b. The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic

concentrations for the hazardous waste expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

8. Procedure for determining a container to be vapor-tight using method 27 of 40 CFR part 60, appendix A, for the purpose of complying with paragraph 3 of subdivision a of subsection 4.
 - a. The test shall be performed in accordance with method 27 of 40 CFR part 60, appendix A.
 - b. A pressure measurement device shall be used that has a precision of plus or minus 0.1 inch [plus or minus 2.5 millimeters] water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.
 - c. If the test results determined by method 27 indicate that the container sustains a pressure change less than or equal to seven hundred fifty pascals within five minutes after it is pressurized to a minimum of four thousand five hundred pascals, then the container is determined to be vapor-tight.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-457. Standards - Closed-vent systems and control devices.

1. This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of sections 33.1-24-05-450 through 33.1-24-05-474.
2. The closed-vent system shall meet the following requirements:
 - a. The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in subsection 3.
 - b. The closed-vent system shall be designed and operated in accordance with the requirements specified in subsection 11 of section 33.1-24-05-403.
 - c. In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph 1 or a seal or locking device as specified in paragraph 2. For the purpose of complying with this subdivision, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.
 - (1) If a flow indicator is used to comply with this subdivision, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this subdivision, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

- (2) If a seal or locking device is used to comply with this subdivision, the device shall be placed on the mechanism by which the bypass device position is controlled (for example, valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.
- d. The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in subsection 12 of section 33.1-24-05-403.
3. The control device shall meet the following requirements:
- a. The control device shall be one of the following devices:
- (1) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least ninety-five percent by weight;
- (2) An enclosed combustion device designed and operated in accordance with the requirements of subsection 3 of section 33.1-24-05-403; or
- (3) A flare designed and operated in accordance with the requirements of subsection 4 of section 33.1-24-05-403.
- b. The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs 1 through 6.
- (1) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year.
- (2) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during periods of planned routine maintenance.
- (3) The specifications and requirements in paragraphs 1, 2, and 3 of subdivision a for control devices do not apply during a control device system malfunction.
- (4) The owner or operator shall demonstrate compliance with the requirements of paragraph 1 (for example, planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraph 1, 2, or 3 of subdivision a, as applicable, shall not exceed two hundred forty hours per year) by recording the information specified in paragraph 5 of subdivision a of subsection 5 of section 33.1-24-05-459.

- (5) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.
- (6) The owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (for example, periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, or fumes, or any combination, to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.
- c. The owner or operator using a carbon adsorption system to comply with subdivision a shall operate and maintain the control device in accordance with the following requirements:
- (1) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of subsection 7 or 8 of section 33.1-24-05-403.
- (2) All carbon that is a hazardous waste and that is removed from the control device shall be managed in accordance with the requirements of subsection 14 of section 33.1-24-05-403, regardless of the average volatile organic concentration of the carbon.
- d. An owner or operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with subdivision a shall operate and maintain the control device in accordance with the requirements of subsection 10 of section 33.1-24-05-403.
- e. The owner or operator shall demonstrate that a control device achieves the performance requirements of subdivision a as follows:
- (1) An owner or operator shall demonstrate using either a performance test as specified in paragraph 3 or a design analysis as specified in paragraph 4 the performance of each control device except for the following:
- (a) A flare;
- (b) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;
- (c) A boiler or process heater into which the vent stream is introduced with the primary fuel;
- (d) A boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under chapter 33.1-24-06 and has designed and operates the unit in accordance with the requirements of sections 33.1-24-05-525 through 33.1-24-05-549; or

- (e) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with sections 33.1-24-05-525 through 33.1-24-05-549.
- (2) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in subsection 5 of section 33.1-24-05-403.
- (3) For a performance test conducted to meet the requirements of paragraph 1, the owner or operator shall use the test methods and procedures specified in subdivisions a through d of subsection 3 of section 33.1-24-05-404.
- (4) For a design analysis conducted to meet the requirements of paragraph 1, the design analysis shall meet the requirements specified in paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.
- (5) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of subdivision a based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.
- f. If the owner or operator and the department do not agree on a demonstration of control device performance using a design analysis, then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph 3 of subdivision e. The department may choose to have an authorized representative observe the performance test.
- g. The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in subdivision b of subsection 6 and subsection 12 of section 33.1-24-05-403. The readings from each monitoring device required by subdivision b of subsection 6 of section 33.1-24-05-403 shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of section 33.1-24-05-457.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-458. Inspection and monitoring requirements.

1. The owner or operator shall inspect and monitor air emission control equipment used to comply with sections 33.1-24-05-450 through 33.1-24-05-474 in accordance with the applicable requirements specified in sections 33.1-24-05-454 through 33.1-24-05-457.
2. The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by subsection 1. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under section 33.1-24-05-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-459. Recordkeeping requirements.

1. Each owner or operator of a facility subject to requirements in sections 33.1-24-05-450 through 33.1-24-05-474 shall record and maintain the information specified in subsections 2 through 10, as applicable to the facility. Except for air emission control equipment design documentation and information required by subsections 9 and 10, records required by this section shall be maintained in the operating record for a minimum of three years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by subsections 9 and 10 shall be maintained in the operating record for as long as the waste management unit is not using air emission controls specified in sections 33.1-24-05-454 through 33.1-24-05-457 in accordance with the conditions specified in subsection 4 or subdivision g of subsection 2 of section 33.1-24-05-450, respectively.

2. The owner or operator of a tank using air emission controls in accordance with the requirements of section 33.1-24-05-454 shall prepare and maintain records for the tank that include the following information:
 - a. For each tank using air emission controls in accordance with the requirements of section 33.1-24-05-454, the owner or operator shall record:
 - (1) A tank identification number (or other unique identification description as selected by the owner or operator).
 - (2) A record for each inspection required by section 33.1-24-05-454 that includes the following information:
 - (a) Date inspection was conducted.
 - (b) For each defect detected during the inspection, the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of section 33.1-24-05-454, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.
 - b. In addition to the information required by subdivision a, the owner or operator shall record the following information, as applicable to the tank:
 - (1) The owner or operator using a fixed roof to comply with the tank level 1 control requirements specified in subsection 3 of section 33.1-24-05-454 shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of subsection 3 of section 33.1-24-05-454. The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

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- (2) The owner or operator using an internal floating roof to comply with the tank level 2 control requirements specified in subsection 5 of section 33.1-24-05-454 shall prepare and maintain documentation describing the floating roof design.
-
- (3) Owners and operators using an external floating roof to comply with the tank level 2 control requirements specified in subsection 6 of section 33.1-24-05-454 shall prepare and maintain the following records:
-
- (a) Documentation describing the floating roof design and the dimensions of the tank.
-
- (b) Records for each seal gap inspection required by subdivision c of subsection 6 of section 33.1-24-05-454 describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in subdivision a of subsection 6 of section 33.1-24-05-454, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.
-
- (4) Each owner or operator using an enclosure to comply with the tank level 2 control requirements specified in subsection 9 of section 33.1-24-05-454 shall prepare and maintain the following records:
-
- (a) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
-
- (b) Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.
-
3. The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of section 33.1-24-05-455 shall prepare and maintain records for the surface impoundment that include the following information:
-
- a. A surface impoundment identification number (or other unique identification description as selected by the owner or operator).
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- b. Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in subsection 3 of section 33.1-24-05-455.
-
- c. A record for each inspection required by section 33.1-24-05-455 that includes the following information:
-
- (1) Date inspection was conducted.

- (2) For each defect detected during the inspection the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of subsection 6 of section 33.1-24-05-455, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.
- d. For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the record specified in subsection 5.
4. The owner or operator of containers using container level 3 air emission controls in accordance with the requirements of section 33.1-24-05-456 shall prepare and maintain records that include the following information:
- a. Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
- b. Records required for the closed-vent system and control device in accordance with the requirements of subsection 5.
5. The owner or operator using a closed-vent system and control device in accordance with the requirements of section 33.1-24-05-457 shall prepare and maintain records that include the following information:
- a. Documentation for the closed-vent system and control device that includes:
- (1) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph 2 or by performance tests as specified in paragraph 3 when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.
- (2) If a design analysis is used, then design documentation as specified in subdivision d of subsection 2 of section 33.1-24-05-405. The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405 and certification by the owner or operator that the control equipment meets the applicable specifications.
- (3) If performance tests are used, then a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-05-405 and all test results.
- (4) Information as required by subdivisions a and b of subsection 3 of section 33.1-24-05-405, as applicable.
- (5) An owner or operator shall record, on a semiannual basis, the information specified in subparagraphs a and b for those planned routine maintenance operations that would require the control device not to meet the requirements

of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-05-457, as applicable.

(a) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next six-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(b) A description of the planned routine maintenance that was performed for the control device during the previous six-month period. This description shall include the type of maintenance performed and the total number of hours during those six months that the control device did not meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-05-457, as applicable, due to planned routine maintenance.

(6) An owner or operator shall record the information specified in subparagraphs a through c for those unexpected control device system malfunctions that would require the control device not to meet the requirements of paragraph 1, 2, or 3 of subdivision a of subsection 3 of section 33.1-24-05-457, as applicable.

(a) The occurrence and duration of each malfunction of the control device system.

(b) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(c) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(7) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with paragraph 2 of subdivision c of subsection 3 of section 33.1-24-05-457.

6. The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of subsection 3 of section 33.1-24-05-452 shall prepare and maintain the following records, as applicable:

a. For tanks, surface impoundments, and containers exempted under the hazardous waste organic concentration conditions specified in subdivision a of subsection 3 or paragraphs 1 through 6 of subdivision b of subsection 3 of section 33.1-24-05-452, the owner or operator shall record information used for each waste determination (such as, test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of section 33.1-24-05-453.

b. For tanks, surface impoundments, or containers exempted under the provisions of paragraph 7 or 8 of subdivision b of subsection 3 of section 33.1-24-05-452, the

owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

7. An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to subsection 12 of section 33.1-24-05-454 or subsection 7 of section 33.1-24-05-455 shall record in a log that is kept in the facility operating record the following information: the identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor", the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

8. The owner or operator of a facility that is subject to sections 33.1-24-05-450 through 33.1-24-05-474 and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of sections 33.1-24-05-450 through 33.1-24-05-474 by documentation either pursuant to sections 33.1-24-05-450 through 33.1-24-05-474, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR part 60 or 61 duplicates the documentation required by this section.

9. For each tank or container not using air emission controls specified in sections 33.1-24-05-454 through 33.1-24-05-457 in accordance with the conditions specified in subsection 4 of section 33.1-24-05-450, the owner or operator shall record and maintain the following information:

a. A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in subdivision a of subsection 4 of section 33.1-24-05-450.

b. A description of how the hazardous waste containing the organic peroxide compounds identified in subdivision a are managed at the facility in tanks and containers. This description shall include:

(1) For tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank a facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.

(2) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe a facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.

c. An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in subdivision a in the tanks and containers as described in subdivision b would create an undue safety hazard if the air emission controls, as required under sections 33.1-24-05-454 through 33.1-24-05-457, are installed and operated on these waste management units. This explanation shall include the following information:

(1) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain how use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under sections 33.1-24-05-450 through 33.1-24-05-474, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(2) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain how use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls as allowed under sections 33.1-24-05-450 through 33.1-24-05-474, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

10. For each hazardous waste management unit not using air emission controls specified in sections 33.1-24-05-454 through 33.1-24-05-457 in accordance with the requirements of subdivision g of subsection 2 of section 33.1-24-05-450, the owner and operator shall record and maintain the following information:

a. Certification that the waste management unit is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, 61, or 63.

b. Identification of the specific requirements codified under 40 CFR part 60, 61, or 63 with which the waste management unit is in compliance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-460. Reporting requirements.

1. Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of subsection 3 of section 33.1-24-05-452 shall report to the department each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in subdivision a or b of subsection 3 of section 33.1-24-05-452, as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than five hundred parts per million weight at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in paragraphs 1 through 6 of subdivision b of subsection 3 of section 33.1-24-05-452. The owner or operator shall submit a written

report within fifteen calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

2. Each owner or operator using air emission controls on a tank in accordance with the requirements of subsection 3 of section 33.1-24-05-454 shall report to the department each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in subsection 2 of section 33.1-24-05-454. The owner or operator shall submit a written report within fifteen calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

3. Each owner or operator using a control device in accordance with the requirements of section 33.1-24-05-457 shall submit a semiannual written report to the department except as provided for in subsection 4. The written report must be signed and dated by the owner or operator or that person's designated representative and shall include the identification number, facility name and address, an explanation why the control device could not be returned to compliance within twenty-four hours, and actions taken to correct the noncompliance and shall describe each occurrence during the previous six-month period when either:

a. A control device is operated continuously for twenty-four hours or longer in noncompliance with the applicable operating values defined in subdivision d of subsection 3 of section 33.1-24-05-405; or

b. A flare is operated with visible emissions for five minutes or longer in a two-hour period, as defined in subsection 4 of section 33.1-24-05-403.

4. A report to the department in accordance with the requirements of subsection 3 is not required for a six-month period during which all control devices subject to sections 33.1-24-05-450 through 33.1-24-05-474 are operated by the owner or operator such that:

a. During no period of twenty-four hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in subdivision d of subsection 3 of section 33.1-24-05-405; and

b. No flare was operated with visible emissions for five minutes or longer in a two-hour period, as defined in subsection 4 of section 33.1-24-05-403.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-461. [Reserved]

33.1-24-05-462. [Reserved]

33.1-24-05-463. [Reserved]

33.1-24-05-464. [Reserved]

33.1-24-05-465. [Reserved]

33.1-24-05-466. [Reserved]

33.1-24-05-467. [Reserved]

33.1-24-05-468. [Reserved]

33.1-24-05-469. [Reserved]

33.1-24-05-470. [Reserved]

33.1-24-05-471. [Reserved]

33.1-24-05-472. [Reserved]

33.1-24-05-473. [Reserved]

33.1-24-05-474. [Reserved]

33.1-24-05-475. Applicability to containment buildings.

The requirements of sections 33.1-24-05-475 through 33.1-24-05-500 apply to owners or operators who store or treat hazardous waste in units designed and operated under section 33.1-24-05-476. The owner or operator is not subject to the definition of land disposal in Resource Conservation and Recovery Act section 3004(k) provided that the unit:

1. Is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;
2. Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the unit;
3. If the unit is used to manage liquids, has:
 - a. A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;
 - b. A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and
 - c. A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time, unless the unit has been granted a

variance from the secondary containment system requirements under subdivision d of subsection 2 of section 33.1-24-05-476;

4. Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in paragraph 4 of subdivision a of subsection 3 of section 33.1-24-05-476; and
5. Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-476. Design and operating standards.

1. All containment buildings must comply with the following design standards:

- a. The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (for example, precipitation, wind, run-on) and to assure containment of managed wastes.
- b. The floor and containment walls of the unit, including the secondary containment system if required under subsection 2, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. The department will consider standards established by professional organizations generally recognized by the industry such as the American concrete institute or the American society of testing materials in judging the structural integrity requirements of this subsection. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for lightweight doors and windows that meet these criteria:
 - (1) They provide an effective barrier against fugitive dust emissions under paragraph 4 of subdivision a of subsection 3; and
 - (2) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.
- c. Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.
- d. A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

2. For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

a. A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (for example, a geomembrane covered by a concrete wear surface).

b. A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

(1) The primary barrier must be sloped to drain liquids to the associated collection system; and

(2) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.

c. A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(1) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(a) Constructed with a bottom slope of one percent or more; and

(b) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} centimeters per second or more and a thickness of twelve inches [30.5 centimeters] or more, or constructed of synthetic or geonet drain materials with a transmissivity of 3×10^{-5} square meters per second.

(2) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(3) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of subdivision a of subsection 5 of section 33.1-24-05-106. In addition, the containment building must meet the requirements of subsection 2 of section 33.1-24-05-106 and subdivisions a and b of subsection 3 of section 33.1-24-05-106 to be considered an acceptable secondary containment system for a tank.)

d. For existing units other than ninety-day generator units, the department may delay the secondary containment requirement for up to two years, based on a

demonstration by the owner or operator that the unit substantially meets the standards of sections 33.1-24-05-475 through 33.1-24-05-500. In making this demonstration, the owner or operator must:

- (1) Provide written notice to the department of the request by November 16, 1992. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;
- (2) Respond to any comments from the department on these plans within thirty days; and
- (3) Fulfill the terms of the revised plans, if such plans are approved by the department.

3. Owners or operators of all containment buildings must:

a. Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

- (1) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;
- (2) Maintain the level of the stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;
- (3) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and
- (4) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR part 60, appendix A, method 22 Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares). In addition, all associated particulate collection devices (for example, fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

b. Obtain and keep onsite a certification by a qualified professional engineer that the containment building design meets the requirements of subsections 1, 2, and 3.

c. Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the owner or operator must repair the condition promptly, in accordance with the following procedures.

- (1) Upon detection of a condition that has led to a release of hazardous waste (for example, upon detection of leakage from the primary barrier) the owner or operator must:

 - (a) Enter a record of the discovery in the facility operating record;
 - (b) Immediately remove the portion of the containment building affected by the condition from service;
 - (c) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and
 - (d) Within seven days after the discovery of the condition, notify the department of the condition, and within fourteen working days, provide a written notice to the department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.
- (2) The department will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
- (3) Upon completing all repairs and cleanup the owner or operator must notify the department in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subparagraph d of paragraph 1 of subdivision c of subsection 3.
- d. Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.
4. For containment buildings that contain both areas with and without secondary containment, the owner or operator must:

 - a. Design and operate each area in accordance with the requirements enumerated in subsections 1, 2, and 3;
 - b. Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and
 - c. Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.
5. Notwithstanding any other provision of sections 33.1-24-05-475 through 33.1-24-05-500, the department may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-477. Closure and postclosure care.

1. At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners for example) contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33.1-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in sections 33.1-24-05-59 through 33.1-24-05-88.
2. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator must close the facility and perform postclosure care in accordance with the closure and postclosure requirements that apply to landfills (section 33.1-24-05-180). In addition, for the purposes of closure, postclosure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in sections 33.1-24-05-59 through 33.1-24-05-88.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-478. [Reserved]

33.1-24-05-479. [Reserved]

33.1-24-05-480. [Reserved]

33.1-24-05-481. [Reserved]

33.1-24-05-482. [Reserved]

33.1-24-05-483. [Reserved]

33.1-24-05-484. [Reserved]

33.1-24-05-485. [Reserved]

33.1-24-05-486. [Reserved]

33.1-24-05-487. [Reserved]

33.1-24-05-488. [Reserved]

33.1-24-05-489. [Reserved]

33.1-24-05-490. [Reserved]

33.1-24-05-491. [Reserved]

33.1-24-05-492. [Reserved]

33.1-24-05-493. [Reserved]

33.1-24-05-494. [Reserved]

33.1-24-05-495. [Reserved]

33.1-24-05-496. [Reserved]

33.1-24-05-497. [Reserved]

33.1-24-05-498. [Reserved]

33.1-24-05-499. [Reserved]

33.1-24-05-500. [Reserved]

33.1-24-05-501. Applicability to drip pads.

1. The requirements of sections 33.1-24-05-501 through 33.1-24-05-524 apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and surface water runoff, or any combination, to an associated collection system. Existing drip pads are those constructed before December 6, 1990, and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads. The requirement of subdivision c of subsection 2 of section 33.1-24-05-504 to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992, except for those constructed after December 24, 1992, for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.
2. The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither runoff nor run-on is generated is not subject to regulation under subsection 5 or 6 of section 33.1-24-05-504.
3. The requirements of sections 33.1-24-05-501 through 33.1-24-05-524 are not applicable to the management of infrequent and incidental drippage in storage yards provided that the owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan must describe how the owner or operator will do the following:
 - a. Clean up the drippage;
 - b. Document the cleanup of the drippage;
 - c. Retain documents regarding cleanup for three years; and
 - d. Manage the contaminated media in a manner consistent with federal regulations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-502. Assessment of existing drip pad integrity.

1. For each existing drip pad as defined in section 33.1-24-05-501, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of sections 33.1-24-05-501 through 33.1-24-05-524, except the requirements for liners and leak detection systems of subsection 2 of section 33.1-24-05-504. No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of section 33.1-24-05-504 are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of section 33.1-24-05-504, except the standards for liners and leak detection systems, specified in subsection 2 of section 33.1-24-05-504.
2. The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of subsection 2 of section 33.1-24-05-504, and submit the plan to the department no later than two years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of section 33.1-24-05-504. The plan must be reviewed and certified by a qualified professional engineer.
3. Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the department, the as-built drawings for the drip pad together with a certification by a qualified professional engineer attesting that the drip pad conforms to the drawings.
4. If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of subsection 13 of section 33.1-24-05-504 or close the drip pad in accordance with section 33.1-24-05-506.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-503. Design and installation of new drip pads.

Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with one of the following:

1. All of the requirements of sections 33.1-24-05-504 (except subdivision d of subsection 1 of section 33.1-24-05-504), 33.1-24-05-505, and 33.1-24-05-506; or
2. All of the requirements of sections 33.1-24-05-504 (except subsection 2 of section 33.1-24-05-504), 33.1-24-05-505, and 33.1-24-05-506.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-504. Design and operating requirements.

1. Drip pads must:

- a. Be constructed of nonearthen materials, excluding wood and nonstructurally supported asphalt;
- b. Be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;
- c. Have a curb or berm around the perimeter;
- d. Drip pads must meet and have on file the following:

(1) Have a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second (for example, existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to 1×10^{-7} centimeters per second), such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with subsection 2 of section 33.1-24-05-503 instead of subsection 1 of section 33.1-24-05-503.

(2) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated, and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for subsection 2.

- e. Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of daily operations (for example, variable and moving loads such as vehicle traffic, movement of wood, etc.).

Note: The department will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American concrete institute (ACI) or the American society of testing and materials (ASTM) in judging the structural integrity requirement of this subdivision.

2. If an owner or operator elects to comply with subsection 1 of section 33.1-24-05-503 instead of subsection 2 of section 33.1-24-05-503, the drip pad must have:

- a. A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the

adjacent subsurface soil or ground water or surface water during the active life of the facility. The liner must be:

- (1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from vehicular traffic on the drip pad);
- (2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
- (3) Installed to cover all surrounding earth that could come in contact with the waste or leakage.

b. A leakage detection system immediately above the liner that is designed, constructed, maintained, and operated to detect leakage from the drip pad. The leakage detection system must be:

- (1) Constructed of materials that are:
 - (a) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and
 - (b) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;
- (2) Designed and operated to function without clogging through the scheduled closure of the drip pad; and
- (3) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

c. A leakage collection system immediately above the liner that is designed, constructed, maintained, and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

3. Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

Note: See subsection 13 of section 33.1-24-05-504 for remedial action required if deterioration or leakage is detected.

4. The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent runoff.

5. Unless protected by a structure, as described in subsection 2 of section 33.1-24-05-501, the owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a twenty-four-hour, twenty-five-year storm, unless the system has sufficient excess capacity to contain any runoff that might enter the system.
6. Unless protected by a structure or cover as described in subsection 2 of section 33.1-24-05-501, the owner or operator, must design, construct, operate, and maintain a runoff management system to collect and control at least the water volume resulting from a twenty-four-hour, twenty-five-year storm.
7. The drip pad must be evaluated to determine that it meets the requirements of subsections 1 through 6 and the owner or operator must obtain a statement from a qualified professional engineer certifying that the drip pad design meets the requirements of this section.
8. Drillage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.
9. The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner or operator must determine if the residues are hazardous as per section 33.1-24-03-02 and, if so, must manage them under article 33.1-24.
10. Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.
11. After being removed from the treatment vessel, treated wood from pressure and nonpressure processes must be held on the drip pad until drillage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.
12. Collection and holding units associated with run-on and runoff control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.
13. Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:
 - a. Upon detection of a condition that may have caused or has caused a release of hazardous waste (for example, upon detection of leakage in the leak detection system), the owner or operator must:
 - (1) Enter a record of the discovery in the facility operating log;

- (2) Immediately remove the portion of the drip pad affected by the condition from service;
 - (3) Determine what steps must be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs; and
 - (4) Within twenty-four hours after discovery of the condition, notify the department of the condition and, within ten working days, provide written notice to the department with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.
- b. The department will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
 - c. Upon completing all repairs and clean-up, the owner or operator must notify the department in writing and provide a certification signed by an independent, qualified registered professional engineer, that the repairs and clean-up have been completed according to the written plan submitted in accordance with paragraph 4 of subdivision a.
- 14. Should a permit be necessary, the department will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.
 - 15. The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-505. Inspections.

- 1. During construction or installation, liners and cover systems (for example, membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (for example, holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of section 33.1-24-05-504 by a qualified professional engineer. This certification must be maintained at the facility as part of the facility operating record. After installation, liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.
- 2. While a drip pad is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:
 - a. Deterioration, malfunctions, or improper operation of run-on and runoff control systems.

- b. The presence of leakage in and proper functioning of leak detection system.
- c. Deterioration or cracking of the drip pad surface.

Note: See subsection 13 of section 33.1-24-05-504 for remedial action required if deterioration or leakage is detected.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-506. Closure.

1. At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.
2. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, the owner or operator must close the facility and perform postclosure care in accordance with closure and postclosure care requirements that apply to landfills in section 33.1-24-05-180. For permitted units, the requirement to have a permit continues throughout the postclosure period. In addition, for the purpose of closure, postclosure, and financial responsibility, such a drip pad is then considered to be landfill, and the owner or operator must meet all of the requirements for landfills specified in sections 33.1-24-05-59 through 33.1-24-05-88.
3. Drip pad:
 - a. The owner or operator of an existing drip pad, as defined in section 33.1-24-05-501, that does not comply with the liner requirements of subdivision a of subsection 2 of section 33.1-24-05-504 must:
 - (1) Include in the closure plan for the drip pad under section 33.1-24-05-61 both a plan for complying with subsection 1 and a contingent plan for complying with subsection 2 in case not all contaminated subsoils can be practicably removed at closure; and
 - (2) Prepare a contingent postclosure plan under section 33.1-24-05-67 for complying with subsection 2 in case not all contaminated subsoils can be practicably removed at closure.
 - b. The cost estimates calculated under sections 33.1-24-05-61 and 33.1-24-05-76 for closure and postclosure care of a drip pad must include the cost of complying with the contingent closure plan and the contingent postclosure plan, but are not required to include the cost of expected closure under subsection 1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-507. [Reserved]

33.1-24-05-508. [Reserved]

33.1-24-05-509. [Reserved]

33.1-24-05-510. [Reserved]

33.1-24-05-511. [Reserved]

33.1-24-05-512. [Reserved]

33.1-24-05-513. [Reserved]

33.1-24-05-514. [Reserved]

33.1-24-05-515. [Reserved]

33.1-24-05-516. [Reserved]

33.1-24-05-517. [Reserved]

33.1-24-05-518. [Reserved]

33.1-24-05-519. [Reserved]

33.1-24-05-520. [Reserved]

33.1-24-05-521. [Reserved]

33.1-24-05-522. [Reserved]

33.1-24-05-523. [Reserved]

33.1-24-05-524. [Reserved]

33.1-24-05-525. Applicability to hazardous waste burned in boilers and industrial furnaces.

1. The regulations of sections 33.1-24-05-525 through 33.1-24-05-549 apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in section 33.1-24-01-04) irrespective of the purpose of burning or processing, except as provided by subsections 2, 3, 4, 7, and 8. In sections 33.1-24-05-525 through 33.1-24-05-549, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 apply to facilities operating under interim status or under a hazardous waste operating permit as specified in sections 33.1-24-05-527 and 33.1-24-05-528.

2. Integration of the maximum achievable control technology standards.

a. Except as provided by subdivisions b through d, the standards of sections 33.1-24-05-525 through 33.1-24-05-549 do not apply to a new hazardous waste boiler or industrial furnace unit that becomes subject to hazardous waste permit requirements after October 12, 2005; or no longer apply when an owner or operator

of an existing hazardous waste boiler or industrial furnace unit demonstrates compliance with the maximum achievable control technology requirements of 40 CFR part 63, subpart EEE, by conducting a comprehensive performance test and submitting to the department a notification of compliance under 40 CFR sections 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR part 63, subpart EEE. Nevertheless, even after this demonstration of compliance with the maximum achievable control technology standards, hazardous waste permit conditions that were based on the standards of sections 33.1-24-05-525 through 33.1-24-05-549 will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

b. The following standards continue to apply:

- (1) If a permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, subdivision a of subsection 5 of section 33.1-24-05-527 requiring operations in accordance with the operating requirements specified in the permit at all times that hazardous waste is in the unit, and paragraph 3 of subdivision b of subsection 5 of section 33.1-24-05-527 requiring compliance with the emission standards and operating requirements during startup and shutdown if hazardous waste is in the combustion chamber, except for particular hazardous wastes. These provisions apply only during startup, shutdown, and malfunction events;
- (2) The closure requirements of subdivision k of subsection 5 of section 33.1-24-05-527 and subsection 12 of section 33.1-24-05-528;
- (3) The standards for direct transfer of section 33.1-24-05-536;
- (4) The standards for regulation of residues of section 33.1-24-05-537; and
- (5) The applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-88, 33.1-24-05-420 through 33.1-24-05-474, and subsection 5 of section 33.1-24-06-16.

c. The owner or operator of a boiler or hydrochloric acid production furnace that is an area source under 40 CFR section 63.2 and the owner or operator elects not to comply with the emission standards under 40 CFR sections 63.1216, 63.1217, and 63.1218 for particulate matter, semivolatile and low volatile metals, and total chlorine, the owner or operator also remains subject to:

- (1) Section 33.1-24-05-530 - Standards to control particulate matter;
- (2) Section 33.1-24-05-531 - Standards to control metals emissions, except for mercury; and
- (3) Section 33.1-24-05-532 - Standards to control hydrogen chloride and chlorine gas.

- d. The particulate matter standard of section 33.1-24-05-530 remains in effect for boilers that elect to comply with the alternative to the particulate matter standard under 40 CFR sections 63.1216(e) and 63.1217(e).
3. The following hazardous wastes and facilities are not subject to regulation under sections 33.1-24-05-525 through 33.1-24-05-549:
- a. Used oil burned for energy recovery that is also hazardous waste solely because it exhibits a characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14. Such used oil is subject to regulation under sections 33.1-24-05-600 through 33.1-24-05-689;
- b. Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;
- c. Hazardous wastes that are exempt from regulation under section 33.1-24-02-04 and paragraphs 4 through 6 of subdivision c of subsection 1 of section 33.1-24-02-06, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under section 33.1-24-02-05; and
- d. Coke ovens, if the only hazardous waste burned is hazardous waste number K087, decanter tank tar sludge from coking operations.
4. Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under sections 33.1-24-05-525 through 33.1-24-05-549, except for sections 33.1-24-05-526 and 33.1-24-05-537.
- a. To be exempt from sections 33.1-24-05-527 through 33.1-24-05-536, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of subdivision c, and owners or operators of lead recovery furnaces that are subject to regulation under the secondary lead smelting national emission standard for hazardous air pollutants must comply with the requirements of subsection 8:
- (1) Provide a one-time written notice to the department indicating the following:
- (a) The owner or operator claims exemption under this subsection;
- (b) The hazardous waste is burned solely for metal recovery consistent with the provisions of subdivision b;
- (c) The hazardous waste contains recoverable levels of metals; and
- (d) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection;

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- (2) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this subsection by using appropriate methods; and
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- (3) Maintain at the facility for at least three years records to document compliance with the provisions of this subsection, including limits on levels of toxic organic constituents and British thermal unit value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.
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- b. A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:
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- (1) The hazardous waste has a total concentration of organic compounds listed in appendix V of chapter 33.1-24-02 exceeding five hundred parts per million by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the five hundred parts per million limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five hundred parts per million limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph 3 of subdivision a; or
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- (2) The hazardous waste has a heating value of five thousand British thermal units per pound or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the five thousand British thermal units per pound limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the five thousand British thermal units per pound limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph 3 of subdivision a.
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- c. To be exempt from sections 33.1-24-05-527 through 33.1-24-05-536, an owner or operator of a lead or nickel-chromium or mercury recovery furnace (except for owners or operators of lead recovery furnaces subject to regulation under the secondary lead smelting national emission standards for hazardous air pollutants), or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must provide a one-time written notice to the department identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this subdivision or subdivision a. The owner or operator must comply with the requirements of subdivision a for those wastes claimed to be exempt under that subdivision and must comply with the requirements below for those wastes claimed to be exempt under subdivision a and must comply with the requirements below for those wastes claimed to be exempt under this subdivision.
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- (1) The hazardous wastes listed in appendices XXVI, XXVII, and XXVIII of chapter 33.1-24-05, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of subdivision a, provided that:

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- (a) A waste listed in appendix XXVI must contain recoverable levels of lead, a waste listed in appendix XXVII must contain recoverable levels of nickel or chromium, a waste listed in appendix XXVIII must contain recoverable levels of mercury and contain less than five hundred parts per million organic constituents listed in appendix V of chapter 33.1-24-02 and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal;
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- (b) The waste does not exhibit the toxicity characteristic of section 33.1-24-02-14 for an organic constituent;
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- (c) The waste is not a hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19 because it is listed for an organic constituent as identified in appendix IV of chapter 33.1-24-02; and
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- (d) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of subdivision c and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to paragraph 2 of subdivision a and records to document compliance with subdivision c shall be kept for at least three years.
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- (2) The department may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix XXVI, XXVII, or XXVIII of chapter 33.1-24-05 that contains a total concentration of more than five hundred parts per million toxic organic compounds listed in appendix V of chapter 33.1-24-02, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of sections 33.1-24-05-525 through 33.1-24-05-549. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of sections 33.1-24-05-525 through 33.1-24-05-549 when burning that material. In making the hazard determination, the department will consider the following factors:
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- (a) The concentration and toxicity of organic constituents in the material;
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- (b) The level of destruction of toxic organic constituents provided by the furnace; and
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- (c) Whether the acceptable ambient levels established in appendix XIX or XX of chapter 33.1-24-05 may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average offsite ground level concentration.
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5. The standards for direct transfer operations under section 33.1-24-05-536 apply only to facilities subject to the permit standards of section 33.1-24-05-527 or the interim status standards of section 33.1-24-05-528.
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6. The management standards for residues under section 33.1-24-05-537 apply to any boiler or industrial furnace burning hazardous waste.

7. Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, irridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under sections 33.1-24-05-525 through 33.1-24-05-549, except for section 33.1-24-05-537. To be exempt from sections 33.1-24-05-526 through 33.1-24-05-536, an owner or operator must:

a. Provide a one-time written notice to the department indicating the following:

(1) The owner or operator claims exemption under this subsection;

(2) The hazardous waste is burned for legitimate recovery of precious metal; and

(3) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this subsection;

b. Sample and analyze the hazardous waste as necessary to document that the waste contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metals; and

c. Maintain at the facility, for at least three years, records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.

8. Starting June 23, 1997, owners or operators of lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the secondary lead smelting national emission standards for hazardous air pollutants are conditionally exempt from regulation under sections 33.1-24-05-525 through 33.1-24-05-549, except for section 33.1-24-05-526. To be exempt, an owner or operator must provide a one-time notice to the department identifying each hazardous waste burned and specifying that the owner or operator claims an exemption under this subsection. The notice also must state that the waste burned has a total concentration of nonmetal compounds listed in appendix V of chapter 33.1-24-02 of less than five hundred parts per million by weight as fired and as provided in paragraph 1 of subdivision b of subsection 4, or is listed in appendix XXVI of chapter 33.1-24-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-16; S.L. 2017, ch. 199, § 19

33.1-24-05-526. Management prior to burning.

1. **Generators.** Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to chapter 33.1-24-03.

2. **Transporters.** Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to chapter 33.1-24-04.

3. **Storage and treatment facilities.**

a. Owners and operators of facilities that store or treat hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of sections

33.1-24-05-01 through 33.1-24-05-190, sections 33.1-24-05-300 through 33.1-24-05-524, sections 33.1-24-05-550 through 33.1-24-05-559, sections 33.1-24-05-800 through 33.1-24-05-819, sections 33.1-24-05-950 through 33.1-24-05-1149, applicable requirements of subsection 5 of section 33.1-24-06-16, and chapter 33.1-24-06, except as provided by subdivision b. These standards apply to storage and treatment by the burner as well as to storage and treatment facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.

- b. Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of section 33.1-24-05-533, hazardous waste that they generate are exempt from regulation under sections 33.1-24-05-01 through 33.1-24-05-190, sections 33.1-24-05-300 through 33.1-24-05-524, sections 33.1-24-05-550 through 33.1-24-05-559, sections 33.1-24-05-800 through 33.1-24-05-819, sections 33.1-24-05-950 through 33.1-24-05-1149, applicable requirements of subsection 5 of section 33.1-24-06-16, and chapter 33.1-24-06, applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in subdivision a.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-527. Permit standards for burners.

1. Applicability.

- a. General. Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status must comply with the requirements of this section and subdivision ff of subsection 2 of section 33.1-24-06-17 and subsection 4 of section 33.1-24-06-19, unless exempt under the small quantity burner exemption of section 33.1-24-05-533.
- b. Applicability of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, except as provided otherwise by sections 33.1-24-05-525 through 33.1-24-05-549:
- (1) Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to section 23.1-04-14 of the North Dakota Century Code or 7003 of the Resource Conservation and Recovery Act;
 - (2) In sections 33.1-24-05-02 through 33.1-24-05-14, sections 33.1-24-05-02 through 33.1-24-05-09;

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- (3) In sections 33.1-24-05-15 through 33.1-24-05-25, sections 33.1-24-05-15 through 33.1-24-05-20;
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- (4) In sections 33.1-24-05-26 through 33.1-24-05-36, sections 33.1-24-05-26 through 33.1-24-05-31;
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- (5) In sections 33.1-24-05-37 through 33.1-24-05-46, the applicable provisions of sections 33.1-24-05-38 through 33.1-24-05-44;
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- (6) In sections 33.1-24-05-47 through 33.1-24-05-58, sections 33.1-24-05-47 and 33.1-24-05-58;
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- (7) In sections 33.1-24-05-59 through 33.1-24-05-73, sections 33.1-24-05-60 through 33.1-24-05-64;
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- (8) In sections 33.1-24-05-74 through 33.1-24-05-88, 33.1-24-05-75, 33.1-24-05-76, 33.1-24-05-77, and 33.1-24-05-79 through 33.1-24-05-81, except that the state and federal governments are exempt from the requirements of sections 33.1-24-05-74 through 33.1-24-05-88; and
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- (9) Sections 33.1-24-05-420 through 33.1-24-05-449, except subsection 1 of section 33.1-24-05-420.

2. Hazardous waste analysis.

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- a. The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in appendix V of chapter 33.1-24-02 that may reasonably be expected to be in the waste. Such constituents must be identified and quantified if present, at levels detectable by using appropriate analytical procedures. The appendix V of chapter 33.1-24-02 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by sections 33.1-24-05-525 through 33.1-24-05-549 and subdivision ff of subsection 2 of section 33.1-24-06-17 and subsection 4 of section 33.1-24-06-19 and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis must be included as a portion of the part B permit application, or, for facilities operating under the interim status standards of sections 33.1-24-05-525 through 33.1-24-05-549, as a portion of the trial burn plan that may be submitted before the part B application under provisions of subdivision g of subsection 4 of section 33.1-24-06-19 as well as any other analysis required by the department in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards must provide the information required by subdivision ff of subsection 2 of section 33.1-24-06-17 or subdivision c of subsection 4 of section 33.1-24-06-19 in the part B application to the greatest extent possible.
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- b. Throughout normal operation, the owner or operator must conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

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3. **Emissions standards.** Owners and operators must comply with emissions standards provided by sections 33.1-24-05-529 through 33.1-24-05-532.

4. Permits.

- a. The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under subsection 5, except in approved trial burns under the conditions specified in subsection 4 of section 33.1-24-06-19.
- b. Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under subdivision ff of subsection 2 of section 33.1-24-06-17.
- c. Boilers and industrial furnaces operating under the interim status standards of section 33.1-24-05-528 are permitted under procedures provided by subdivision g of subsection 4 of section 33.1-24-06-19.
- d. A permit for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim status standards) must establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of subsection 5, in order to comply with the following standards:
 - (1) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of seven hundred twenty hours operating time when burning hazardous waste, the operating requirements must be those most likely to ensure compliance with the emission standards of section 33.1-24-05-529 through 33.1-24-05-532, based on the department's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of section 33.1-24-05-529, 33.1-24-05-530, 33.1-24-05-531, or 33.1-24-05-532. The department may extend the duration of this period for up to seven hundred twenty additional hours when good cause for the extension is demonstrated by the applicant.
 - (2) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 and must be in accordance with the approved trial burn plan.
 - (3) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the department to reflect the trial burn results, the operating requirements must be those likely to ensure compliance with the emission standards sections 33.1-24-05-529 through 33.1-24-05-532 based on the department's engineering judgment.

(4) For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in subdivision ff of subsection 2 of section 33.1-24-06-17, as sufficient to ensure compliance with the emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532.

5. Operating requirements.

a. General. A boiler or industrial furnace burning hazardous waste must be operated in accordance with the operating requirements specified in the permit at all times where there is hazardous waste in the unit.

b. Requirements to ensure compliance with the organic emissions standards:

(1) Destruction and removal efficiency standard. Operating conditions will be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated (in a trial burn or by alternative data as specified in subdivision ff of subsection 2 of section 33.1-24-06-17) to be sufficient to comply with the destruction and removal efficiency performance standard of subsection 1 of section 33.1-24-05-529 or as those special operating requirements provided by subdivision d of subsection 1 of section 33.1-24-05-529 for the waiver of the destruction and removal efficiency trial burn. When the destruction and removal efficiency trial burn is not waived under subdivision d of subsection 1 of section 33.1-24-05-529, each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the destruction and removal efficiency performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

(a) Feed rate of hazardous waste and other fuels measured and specified as prescribed in subdivision f;

(b) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in subdivision f;

(c) Appropriate controls of the hazardous waste firing system;

(d) Allowable variation in boiler or industrial furnace system design or operating procedures;

(e) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in subdivision f;

(f) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in subdivision f, unless documentation is provided under subsection 4 of section 33.1-24-06-19 demonstrating adequate combustion gas residence time; and

- (g) Such other operating requirements as are necessary to ensure that the destruction and removal efficiency performance standards of subsection 1 of section 33.1-24-05-529 are met.
- (2) Carbon monoxide and hydrocarbon standards. The permit must incorporate a carbon monoxide limit and, as appropriate, a hydrocarbon limit as provided by subsections 2 through 6 of section 33.1-24-05-529. The permit limits will be specified as follows:
- (a) When complying with the carbon monoxide standard of subdivision a of subsection 2 of section 33.1-24-05-529, the permit limit is one hundred parts per million by volume.
- (b) When complying with the alternative carbon monoxide standard under subsection 3 of section 33.1-24-05-529, the permit limit for carbon monoxide is based on the trial burn and is established as the average overall valid runs of the highest hourly rolling average carbon monoxide level of each run, and the permit limit for hydrocarbon is twenty parts per million by volume (as defined in subdivision a of subsection 3 of section 33.1-24-05-529), except as provided in subsection 6 of section 33.1-24-05-529.
- (c) When complying with the alternative hydrocarbon limit for industrial furnaces under subsection 6 of section 33.1-24-05-529, the permit limit for hydrocarbon and carbon monoxide is the baseline level when hazardous waste is not burned as specified by that subsection.
- (3) Startup and shutdown. During startup and shutdown of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the tier I (or adjusted tier I) feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the trial burn requirements under subdivision e of subsection 1 of section 33.1-24-05-529, sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532) must not be fed into the device unless the device is operating within the conditions of operation specified in the permit.
- c. Requirements to ensure conformance with the particulate standard.
- (1) Except as provided in paragraphs 2 and 3, the permit shall specify the following operating requirements to ensure conformance with the particulate standard specified in section 33.1-24-05-530:
- (a) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in subdivision f;
- (b) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in subdivision f;
- (c) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

- (d) Allowable variation in boiler or industrial furnace system design, including any air pollution control system or operating procedures; and
 - (e) Such other operating requirements as are necessary to ensure that the particulate standard in subsection 1 of section 33.1-24-05-530 is met.
 - (2) Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities exempt from the particulate matter standard under subsection 2 of section 33.1-24-05-530.
 - (3) For cement kilns and lightweight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.
- d. Requirements to ensure conformance with the metals emissions standard.
- (1) For conformance with the tier I (or adjusted tier I) metals feed rate screening limits of subsection 2 or 5 of section 33.1-24-05-531, the permit shall specify the following operating requirements:
 - (a) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of subdivision f;
 - (b) Total feed rate of hazardous waste measured and specified as prescribed in subdivision f; and
 - (c) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;
 - (2) For conformance with the tier II metals emission rate screening limits under subsection 3 of section 33.1-24-05-531 and the tier III metals controls under subsection 4 of section 33.1-24-05-531, the permit shall specify the following operating requirements:
 - (a) Maximum emission rate for each metal specified as the average emission rate during the trial burn;
 - (b) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph 1 of subdivision f; and
 - (c) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in subdivision f:
 - [1] Total feedstreams;
 - [2] Total hazardous waste feed;
 - [3] Total pumpable hazardous waste feed;
 - [4] Total feed rate of chlorine and chloride in total feedstreams measured and specified as prescribed in subdivision f;

- [5] Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in subdivision f;
 - [6] Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in subdivision f;
 - [7] Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in subdivision f;
 - [8] Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
 - [9] Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and
 - [10] Such other operating requirements as are necessary to ensure that the metal standards under subsection 3 of section 33.1-24-05-531 or subsection 4 of section 33.1-24-05-531 are met; and
- (3) For conformance with an alternative implementation approach approved by the department under subsection 6 of section 33.1-24-05-531, the permit will specify the following operating requirements:
- (a) Maximum emission rate for each metal specified as the average emission rate during the trial burn;
 - (b) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph 1 of subdivision f;
 - (c) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in subdivision f:
 - [1] Total hazardous waste feed; and
 - [2] Total pumpable hazardous waste feed;
 - (d) Total feed rate of chlorine and chloride in total feedstreams measured and specified prescribed in subdivision f;
 - (e) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in subdivision f;
 - (f) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in subdivision f;

- (g) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in subdivision f;
 - (h) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
 - (i) Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and
 - (j) Such other operating requirements as are necessary to ensure that the metals standards under subsection 3 of section 33.1-24-05-531 or subsection 4 of section 33.1-24-05-531 are met.
- e. Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.
- (1) For conformance with the tier I total chloride and chlorine feed rate screening limits of subdivision a of subsection 2 of section 33.1-24-05-532, the permit will specify the following operating requirements:
 - (a) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in subdivision f;
 - (b) Feed rate of total hazardous waste measured and specified as prescribed in subdivision f; and
 - (c) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks; and
 - (2) For conformance with the tier II hydrogen chloride and for chlorine emission rate screening limits under subdivision b of subsection 2 of section 33.1-24-05-532 and the tier III hydrogen chloride and chlorine controls under subsection 3 of section 33.1-24-05-532, the permit will specify the following operating requirements:
 - (a) Maximum emission rate for hydrogen chloride and for chlorine specified as the average emission rate during the trial burn;
 - (b) Feed rate of total hazardous waste measured and specified as prescribed in subdivision f;
 - (c) Total feed rate of chlorine and chloride in total feedstreams, measured and specified as prescribed in subdivision f;
 - (d) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in subdivision f;
 - (e) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(f) Allowable variation in boiler or industrial furnace system design including any air pollution control system or operating procedures; and

(g) Such other operating requirements as are necessary to ensure that the hydrogen chloride and chlorine standards under subdivision b of subsection 2 or subsection 3 of section 33.1-24-05-532 are met.

f. Measuring parameters and establishing limits based on trial burn data.

(1) General requirements. As specified in subdivisions b through e, each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures:

(a) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis (for example, the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or

(b) Hourly rolling average.

[1] The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

[a] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.

[b] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.

[2] The permit limit for the parameter shall be established based on trial burn data as the average overall valid test runs of the highest hourly rolling average value for each run.

(2) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (for example, arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph 1 or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an average period from two to twenty-four hours:

(a) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(b) The continuous monitor shall meet the following specifications:

[1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds;

[2] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of the preceding clock hour; and

(c) The permit limit for the feed rate of each metal shall be established based on trial burn data as the average overall valid test runs of the highest hourly rolling average feed rate for each run.

(3) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride and chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs 1 and 2.

(4) Conduct of trial burn testing.

(a) If compliance with all applicable emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(b) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 or establishing limits on operating parameters under this section, the facility must operate under trial burn conditions for a sufficient period to reach steady-state operations. The department may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under subsection 6 of section 33.1-24-05-531 need not reach steady-state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

(c) Trial burn data on the level of an operating parameter for which a limit must be established in the permit must be obtained during emission sampling for the pollutant(s) (for example, metals, particulate matter, hydrogen chloride, and chlorine organic compounds) for which the parameter must be established as specified by this subsection.

g. General requirements.

(1) Fugitive emissions. Fugitive emissions must be controlled by:

(a) Keeping the combustion zone totally sealed against fugitive emissions;

(b) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(c) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(2) Automatic waste feed cutoff. A boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this section. The department may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

(a) The permit limit for (the indicator of) minimum combustion chamber temperature must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;

(b) Exhaust gases must be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and

(c) Operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the department will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.

(3) Changes. A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.

h. Monitoring and inspections.

(1) The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:

(a) If specified by the permit, feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine;

(b) If specified by the permit, carbon monoxide, hydrocarbons, and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements specified in paragraph 2 of subdivision b. Carbon monoxide, hydrocarbon, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in appendix XXIV of chapter 33.1-24-05; and

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- (c) Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues, and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the applicable standards of sections 33.1-24-05-529, 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532.
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- (2) All monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit.
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- (3) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, et cetera) must be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.
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- (4) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the department that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing must be conducted at least once every thirty days.
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- (5) These monitoring and inspection data must be recorded and the records must be placed in the operating record required by section 33.1-24-05-40.
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- i. Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with section 33.1-24-05-536.
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- j. Recordkeeping. The owner or operator must maintain in the operating record of the facility all information and data required by this section for five years.
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- k. Closure. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-528. Interim status standards for burners.

1. Purpose, scope, applicability.

a. General.

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- (1) The purpose of this section is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim status. The standards of this section apply to owners and operators of existing facilities until either a permit is issued under subsection 4 of section 33.1-24-05-527 or until closure responsibilities identified in this section are fulfilled.

- (2) Existing or in existence means a boiler or industrial furnace that on or before August 1, 1991, is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn or to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction; and either:
- (a) A continuous onsite, physical construction program has begun; or
- (b) The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.
- (3) If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility must comply with the applicable regulations dealing with permit modifications in section 33.1-24-06-14 or changes in interim status in subsection 5 of section 33.1-24-06-16.
- b. Exemptions. The requirements of this section do not apply to hazardous waste and facilities exempt under subsection 2 of section 33.1-24-05-525, or section 33.1-24-05-533.
- c. Prohibition on burning dioxin-listed wastes. The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under interim status: F020, F021, F022, F023, F026, and F027.
- d. Applicability of interim status standards. Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions:
- (1) Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to section 23.1-04-14 of the North Dakota Century Code or 7003 of the Resource Conservation and Recovery Act;
- (2) General facility standards, sections 33.1-24-05-02 through 33.1-24-05-08;
- (3) Preparedness and prevention, sections 33.1-24-05-15 through 33.1-24-05-20;
- (4) Contingency plan and emergency procedures, sections 33.1-24-05-26 through 33.1-24-05-31;
- (5) Manifest system, recordkeeping and reporting, sections 33.1-24-05-38 through 33.1-24-05-44, except that sections 33.1-24-05-38, 33.1-24-05-39, and 33.1-24-05-43 do not apply to owners and operators of onsite facilities that do not receive any hazardous waste from offsite sources;
- (6) Closure and postclosure, sections 33.1-24-05-60 through 33.1-24-05-64;
- (7) Financial requirements, sections 33.1-24-05-75 through 33.1-24-05-77 and sections 33.1-24-05-79 through 33.1-24-05-81, except that states and the federal government are exempt from the financial requirements; and

(8) Air emission standards for equipment leaks, sections 33.1-24-05-420 through 33.1-24-05-449, except subsection 1 of section 33.1-24-05-420.

e. Special requirements for furnaces. The following controls apply during interim status to industrial furnaces (for example, kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see paragraph 2) at any location other than the hot end where products are normally discharged or where fuels are normally fired:

(1) Controls.

(a) The hazardous waste shall be fed at a location where combustion gas temperatures are at least one thousand eight hundred degrees Fahrenheit [982.2 degrees Celsius];

(b) The owner or operator must determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;

(c) For cement kiln systems, the hazardous waste shall be fed into the kiln; and

(d) The hydrocarbon controls of subsection 3 of section 33.1-24-05-529 or subdivision e of subsection 3 apply upon certification of compliance under subsection 3 irrespective of the carbon monoxide level achieved during the compliance test.

(2) Burning hazardous waste solely as an ingredient. A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

(a) The hazardous waste has a total concentration of nonmetal compounds listed in appendix V of chapter 33.1-24-02 exceeding five hundred parts per million by weight, as-fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as-generated may be reduced to the five hundred parts per million limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the five hundred parts per million limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the facility record; or

(b) The hazardous waste has a heating value of five thousand British thermal units per pound or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the five thousand British thermal units per pound limit by bona fide treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the five thousand British thermal units per pound limit is prohibited and documentation that the waste has not been impermissibly blended must be retained in the facility record.

f. Restrictions on burning hazardous waste that is not a fuel. Prior to certification of compliance under subsection 3, owners and operators shall not feed hazardous waste that has a heating value less than five thousand British thermal units per

pound as-generated (except that the heating value of a waste as-generated may be increased to above the five thousand British thermal units per pound limit by bona fide treatment; however, blending to augment the heating value to meet the five thousand British thermal units per pound limit is prohibited and records must be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:

(1) Hazardous waste may be burned solely as an ingredient;

(2) Hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed seven hundred twenty hours;

(3) Such waste may be burned if the department has documentation to show that, prior to August 21, 1991:

(a) The boiler or industrial furnace is operating under the interim status standards for incinerators or thermal treatment units provided by subsection 5 of section 33.1-24-06-16;

(b) The boiler or industrial furnace met the interim status eligibility requirements under subsection 5 of section 33.1-24-06-16; and

(c) Hazardous waste with a heating value less than five thousand British thermal units per pound was burned prior to that date; or

(4) Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under subsection 5 of section 33.1-24-02-02 prior to February 21, 1991, and documentation is kept on file supporting this claim.

g. Direct transfer to the burner. If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with section 33.1-24-05-536.

2. Certification of precompliance.

a. General. The owner or operator must provide complete and accurate information specified in subdivision b to the department on or before August 21, 1991, and must establish limits for the operating parameters specified in subdivision c. Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in subdivision c, the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and hydrogen chloride and chlorine are not likely to exceed the limits provided by sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under subdivision c until the owner or operator submits a revised certification of precompliance under subdivision h or a certification of compliance under subsection 3, or until a permit is issued.

b. Information required. The following information must be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in subdivision c are not likely to

result in an exceedance of the allowable emission rates for particulate matter, metals, and hydrogen chloride and chlorine:

(1) General facility information:

(a) Identification number;

(b) Facility name, contact person, telephone number, and address;

(c) Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;

(d) A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and

(e) A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.

(2) Except for facilities complying with the tier I or adjusted tier I feed rate screening limits for metals or total chlorine and chloride provided by subsection 2 or 5 of section 33.1-24-05-531 and subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532 respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by section 33.1-24-05-531, and hydrogen chloride and chlorine, and the following information to support such determinations:

(a) The feed rate (pound per hour) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks).

(b) The estimated partitioning factor to the combustion gas for the materials identified in subparagraph a and the basis for the estimate and an estimate of the partitioning to hydrogen chloride and chlorine of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator must use either best engineering judgment or the procedures specified in appendix XXIV of chapter 33.1-24-05.

(c) For industrial furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions standards under subparagraph a of paragraph 2 of subdivision c of subsection 3, the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator must use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in appendix XXIV of chapter 33.1-24-05.

(d) If best engineering judgment is used to estimate partitioning factors or enrichment factors under subparagraph b or c respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under this section,

the determinations must be made by a qualified, registered professional engineer and a certification of his or her determinations in accordance with subsection 4 of section 33.1-24-06-03 must be provided in the certification of precompliance.

(3) For facilities complying with the tier I or adjusted tier I feed rate screening limits for metals or total chlorine and chloride provided by subsection 2 or 5 of section 33.1-24-05-531 and subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532, the feed rate (pound per hour) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks).

(4) For facilities complying with the tier II or tier III emission limits for metals or hydrogen chloride and chlorine (under subsection 3 or 4 of section 33.1-24-05-531 or subdivision b of subsection 2 or subsection 3 of section 33.1-24-05-532), the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by section 33.1-24-05-531, and hydrogen chloride and chlorine, and the following information to support such determinations:

(a) The estimated air pollution control system removal efficiency for particulate matter, hydrogen chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.

(b) To estimate air pollution control system removal efficiency, the owner or operator must use either best engineering judgment or the procedures prescribed in appendix XXIV of chapter 33.1-24-05.

(c) If best engineering judgment is used to estimate air pollution control system removal efficiency, the basis for the judgment. Use of best engineering judgment must be in conformance with provisions of subparagraph d of paragraph 2.

(5) Determination of allowable emissions rates for hydrogen chloride, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:

(a) For all facilities:

[1] Physical stack height;

[2] Good engineering practice stack height as defined by 40 CFR 51.100(ii);

[3] Maximum flue gas flow rate;

[4] Maximum flue gas temperature;

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- [5] Attach a United States geological service topographic map (or equivalent) showing the facility location and surrounding land within five kilometers of the facility;
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- [6] Identify terrain type: complex or noncomplex; and
-
- [7] Identify land use: urban or rural.
- (b) For owners and operators using tier III site-specific dispersion modeling to determine allowable levels under subsection 4 of section 33.1-24-05-531 or subsection 3 of section 33.1-24-05-532, or adjusted tier I feed rate screening limits under subsection 5 of section 33.1-24-05-531 or subsection 5 of section 33.1-24-05-532:
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- [1] Dispersion model and version used;
-
- [2] Source of meteorological data;
-
- [3] The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average offsite (unless onsite is required) ground level concentration (maximum exposed individual location); and
-
- [4] Indicate the maximum exposed individual location on the map required under item 5 of subparagraph a;
- (6) For facilities complying with the tier II or tier III emissions rate controls for metals or hydrogen chloride and chlorine, a comparison of the estimated controlled emissions rates determined under paragraph 4 with the allowable emission rates determined under paragraph 5;
-
- (7) For facilities complying with the tier I (or adjusted tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under paragraph 3 to the tier I allowable feed rates;
-
- (8) For industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient (as defined by paragraph 2 of subdivision e of subsection 1) at any location other than the product discharge end of the device, documentation of compliance with the requirements of subparagraph a, b, or c of paragraph 1 of subdivision e of subsection 1; and
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- (9) For industrial furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions standards under subparagraph a of paragraph 2 of subdivision c of subsection 3:
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- (a) The applicable particulate matter standard in pound per hour; and
-
- (b) The precompliance limit on the concentration of each metal in collected particulate matter.
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- c. Limits on operating conditions. The owner and operator shall establish limits on the following parameters consistent with the determinations made under paragraph 2 of subdivision b and certify (under provisions of subdivision i) to the department

that the facility will operate within the limits during interim status when there is hazardous waste in the unit until revised certification of precompliance under subdivision h or certification of compliance under subsection 3:

(1) Feed rate of total hazardous waste and (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531) pumpable hazardous waste;

(2) Feed rate of each metal in the following feedstreams:

(a) Total feedstreams, except that industrial furnaces that comply with the alternative metals implementation approach under subdivision d must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

(b) Total hazardous waste feed, unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531; and

(c) Total pumpable hazardous waste feed, unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531;

(3) Total feed rate of chlorine and chloride in total feedstreams;

(4) Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited; and

(5) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the tier I or adjusted tier I feed rate screening limits for chlorine under subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532 and for all metals under subsection 2 or 5 of section 33.1-24-05-531, and the uncontrolled particulate emissions do not exceed the standard under section 33.1-24-05-530.

d. Operating requirements for furnaces that recycle particulate matter. Owners and operators of furnaces that recycle collected particulate matter back into the furnace and that will certify compliance with the metals emissions controls under subparagraph a of paragraph 2 of subdivision c of subsection 3 must comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in appendix XXIV of chapter 33.1-24-05.

e. Measurement of feed rates and production rate.

(1) General requirements. Limits on each of the parameters specified in subdivision c (except for limits on metals concentrations in collected particulate matter for industrial furnaces that recycle collected particulate matter) must be established and continuously monitored under either of the following methods:

(a) Instantaneous limits. A limit for a parameter may be established and continuously monitored and recorded on an instantaneous basis (for

example, the value that occurs at any time) not to be exceeded at any time; or

(b) Hourly rolling average limits. A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

[1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.

[2] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.

(2) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subparagraph b of paragraph 1 or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an averaging period from two to twenty-four hours:

(a) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis; and

(b) The continuous monitor shall meet the following specifications:

[1] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.

[2] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of preceding clock hour.

(3) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride, chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs 1 and 2.

f. Public notice requirements at precompliance. On or before August 21, 1991, the owner or operator must submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of state and local government. The owner or operator must

provide to the department with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of subsection 2 of section 33.1-24-05-528", must include:

(1) Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste;

(2) Date that the certification of precompliance is submitted to the department;

(3) Brief description of the regulatory process required to comply with the interim status requirements including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and hydrogen chloride and chlorine;

(4) Types and quantities of hazardous waste burned including source, whether solids or liquids, as well as an appropriate description of the waste;

(5) Type of device or devices in which the hazardous waste is burned including a physical description and maximum production rate of each device;

(6) Types and quantities of other fuels and industrial furnace feedstocks fed to each unit;

(7) Brief description of the basis for this certification of precompliance as specified in subdivision b;

(8) Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include:

(a) The administrative record kept by the department where the supporting documentation was submitted or another location designated by the department; and

(b) The boiler and industrial furnace correspondence file kept at the facility site where the device is located. The correspondence file must include all correspondence between the facility and the department and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of state site visit reports submitted to the owner or operator;

(9) Notification of the establishment of a facility mailing list whereby interested parties shall notify the department that they wish to be placed on the mailing list to receive future information and notices about this facility; and

(10) Location (mailing address) of the department, where further information can be obtained on regulation of hazardous waste burning.

g. Monitoring other operating parameters. When the monitoring systems for the operating parameters listed in paragraphs 5 through 13 of subdivision a of subsection 3 are installed and operating in conformance with vendor specifications

or (for carbon monoxide, hydrocarbon, and oxygen) specifications provided by appendix XXIV of chapter 33.1-24-05, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

h. Revised certification of precompliance. The owner or operator may revise at any time the information and operating conditions documented under subdivisions b and c in the certification of precompliance by submitting a revised certification of precompliance under procedures provided by those subdivisions.

(1) The public notice requirements of subdivision f do not apply to recertifications.

(2) The owner and operator must operate the facility within the limits established for the operating parameters under subdivision c until a revised certification is submitted under this subdivision or a certification of compliance is submitted under subsection 3.

i. Certification of precompliance statement. The owner or operator must include the following signed statement with the certification of precompliance submitted to the department:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of subsection 2 are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to paragraphs c and d of subsection 2 are enforceable limits at which the facility can legally operate during interim status until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating permit is issued."

3. **Certification of compliance.** The owner or operator shall conduct emissions testing to document compliance with the emissions standards of subsections 2 through 5 of section 33.1-24-05-529, sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1, under the procedures prescribed by this subsection, except under extensions of time provided by subdivision g. Based on the compliance test, the owner or operator shall submit to the department, on or before August 21, 1992, a complete and accurate "certification of compliance" (under subdivision d) with those emission standards establishing limits on the operating parameters specified in subdivision a.

a. Limits on operating conditions. The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in paragraph 4 of subdivision d) and include these limits with

the certification of compliance. The boiler or industrial furnace must be operated in accordance with these operating limits and all applicable emissions standards of subsections 2 through 5 of section 33.1-24-05-529, sections 33.1-24-05-530 through 33.1-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1 at all times when there is hazardous waste in the unit until an operating permit is issued.

(1) Feed rate of total hazardous waste and (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531), pumpable hazardous waste;

(2) Feed rate of each metal in the following feedstreams:

(a) Total feedstreams, except that:

[1] Facilities that comply with tier I or adjusted tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under subsection 2 or 5 of section 33.1-24-05-531; and

[2] Industrial furnaces that must comply with the alternative metals implementation approach under paragraph 2 of subdivision c must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

(b) Total hazardous waste feed (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531); and

(c) Total pumpable hazardous waste feed (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531);

(3) Total feed rate of chlorine and chloride in total feedstreams, except that facilities that comply with tier I or adjusted tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under subdivision a of subsection 1 or subsection 5 of section 33.1-24-05-532;

(4) Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited;

(5) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the carbon monoxide controls of subsection 2 of section 33.1-24-05-529, the carbon monoxide limit is one hundred parts per million by volume, and when complying with the hydrocarbon controls of subsection 3 of section 33.1-24-05-529, the hydrocarbon limit is twenty parts per million by volume. When complying with the carbon monoxide controls of subsection 3 of section 33.1-24-05-529, the carbon monoxide limit is established based on the compliance test;

(6) Maximum production rate of the device in appropriate units when producing normal product, except that facilities that comply with tier I or adjusted tier I

feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under subdivision a of subsection 1 or subsection 5 of section 33.1-24-05-532 and for all metals under subsection 2 or 5 of section 33.1-24-05-531, and the uncontrolled particulate emissions do not exceed the standard under section 33.1-24-05-530;

(7) Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531);

(8) Maximum flue gas temperature entering a particulate matter control device (unless complying with tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-532);

(9) For systems using wet scrubbers, including wet ionizing scrubbers (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-531);

(a) Minimum liquid to flue gas ratio;

(b) Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and

(c) Minimum pH level of the scrubber water;

(10) For systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532);

(11) For systems using dry scrubbers (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532);

(a) Minimum caustic feed rate; and

(b) Maximum flue gas flow rate;

(12) For systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532);

- (a) Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and
- (b) Maximum flue gas flow rate;
- (13) For systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the tier I or adjusted tier I metals feed rate screening limits under subsection 2 or 5 of section 33.1-24-05-531 and the total chlorine and chloride feed rate screening limits under subdivision a of subsection 2 of subsection 5 of section 33.1-24-05-532).
- b. Prior notice of compliance testing. At least thirty days prior to the compliance testing required by subdivision c, the owner or operator shall notify the department and submit the following information:
 - (1) General facility information including:
 - (a) Identification number;
 - (b) Facility name, contact person, telephone number, and address;
 - (c) Person responsible for conducting compliance test, including company name, address, and telephone number, and a statement of qualifications; and
 - (d) Planned date of the compliance test;
 - (2) Specific information on each device to be tested including:
 - (a) Description of boiler or industrial furnace;
 - (b) A scaled plot plan showing the entire facility and location of the boiler or industrial furnace;
 - (c) A description of the air pollution control system;
 - (d) Identification of the continuous emission monitors that are installed, including:
 - [1] Carbon monoxide monitor;
 - [2] Oxygen monitor; and
 - [3] Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than one hundred fifty degrees Celsius, an explanation of why a heated system is not used (see subdivision e) and a brief description of the sample gas conditioning system;
 - (e) Indication of whether the stack is shared with another device that will be in operation during the compliance test; and
 - (f) Other information useful to an understanding of the system design or operation; and

(3) Information on the testing planned, including a complete copy of the test protocol and quality assurance/quality control plan, and a summary description for each test providing the following information at a minimum:

(a) Purpose of the test (for example, demonstrate compliance with emissions of particulate matter); and

(b) Planned operating conditions, including levels for each pertinent parameter specified in subdivision a.

c. Compliance testing.

(1) General. Compliance testing must be conducted under conditions for which the owner or operator has submitted a certification of precompliance under subsection 2 and under conditions established in the notification of testing required by subdivision b. The owner or operator may seek approval on a case-by-case basis to use compliance test data from one unit in lieu of testing a similar onsite unit. To support the request, the owner or operator must provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation, and maintenance of both the tested unit and the similar unit. The department shall provide a written approval to use compliance test data in lieu of testing a similar unit if the department finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of subsection 3.

(2) Special requirements for industrial furnaces that recycle collected particulate matter. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter from the air pollution control system must comply with one of the following procedures for testing to determine compliance with the metals standards of subsection 3 or 4 of section 33.1-24-05-531:

(a) The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in appendix XXIV of chapter 33.1-24-05; or

(b) Stack emissions testing for a minimum of six hours each day while hazardous waste is burned during interim status. The testing must be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content must be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under subsection 3 or 4 of section 33.1-24-05-531. Under this option, operating limits (under subdivision a) must be established during compliance testing under subdivision c only on the following parameters:

[1] Feed rate of total hazardous waste;

[2] Total feed rate of chlorine and chloride in total feedstreams;

[3] Total feed rate of ash in total feedstreams, except that the ash feed rate for cement kilns and lightweight aggregate kilns is not limited;

[4] Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas; and

[5] Maximum production rate of the device in appropriate units when producing normal product; or

(c) Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of subdivision a only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test must be fed at the feed rates that will be fed during the compliance test.

(3) Conduct of compliance testing.

(a) If compliance with all applicable emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(b) Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532 or establishing limits on operating parameters under this section, the facility must operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with subparagraph a or b of paragraph 2, however, need not reach steady-state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

(c) Compliance test data on the level of an operating parameter for which a limit must be established in the certification of compliance must be obtained during emissions sampling for the pollutant or pollutants (for example, metals, particulate matter, hydrogen chloride and chlorine, organic compounds) for which the parameter must be established as specified by subdivision a.

d. Certification of compliance. Within ninety days of completing compliance testing, the owner or operator must certify to the department compliance with the emissions standards of subsections 2, 3, and 5 of section 33.1-24-05-529, sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532, and subparagraph d of paragraph 1 of subdivision e of subsection 1. The certification of compliance must include the following information:

(1) General facility and testing information including:

(a) Identification number;

- _____ (b) Facility name, contact person, telephone number, and address;
- _____ (c) Person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;
- _____ (d) Date or dates of each compliance test;
- _____ (e) Description of boiler or industrial furnace tested;
- _____ (f) Person responsible for quality assurance/quality control, title, and telephone number, and statement that procedures prescribed in the quality assurance/quality control plan submitted under paragraph 3 of subdivision b have been followed, or a description of any changes and an explanation of why changes were necessary;
- _____ (g) Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under subdivision b, and an explanation of why the changes were necessary;
- _____ (h) Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under subdivision b, and an explanation of why the changes were necessary; and
- _____ (i) The complete report on results of emissions testing.
- _____ (2) Specific information on each test including:
- _____ (a) Purpose or purposes of test (for example, demonstrate conformance with the emissions limits for particulate matter, metals, hydrogen chloride, chlorine, and carbon monoxide).
- _____ (b) Summary of test results for each run and for each test including the following information:
- _____ [1] Date of run;
- _____ [2] Duration of run;
- _____ [3] Time-weighted average and highest hourly rolling average carbon monoxide level for each run and for the test;
- _____ [4] Highest hourly rolling average hydrocarbon level, if hydrocarbon monitoring is required for each run and for the test;
- _____ [5] If dioxin and furan testing is required under subsection 5 of section 33.1-24-05-529, time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;

-
- [6] Time-weighted average particulate matter emissions for each run and for the test;
-
- [7] Time-weighted average hydrogen chloride and chlorine emissions for each run and for the test;
-
- [8] Time-weighted average emissions for the metals subject to regulation under section 33.1-24-05-531 for each run and for the test; and
-
- [9] Quality assurance and quality control results.
-
- (3) Comparison of the actual emissions during each test with the emissions limits prescribed by subsections 2, 3, and 5 of section 33.1-24-05-529, sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532 and established for the facility in the certification of precompliance under subsection 2.
-
- (4) Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in subdivision a using either of the following procedures:
-
- (a) Instantaneous limits. A parameter may be measured and recorded on an instantaneous basis (for example, the value that occurs at any time) and the operating limit specified as the time-weighted average during all runs of the compliance test; or
-
- (b) Hourly rolling average basis.
-
- [1] The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
-
- [a] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds.
-
- [b] An hourly rolling average is the arithmetic mean of the sixty most recent one-minute average values recorded by the continuous monitoring system.
-
- [2] The operating limit for the parameter shall be established based on compliance test data as the average overall test runs of the highest hourly rolling average value for each run.
-
- (c) Rolling average limits for carcinogenic metals and lead. Feed rate limits for the carcinogenic metals (for example, arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by subparagraph b or on (up to) a twenty-four hour rolling average basis. If the owner or operator elects to use an averaging period from two to twenty-four hours:

[1] The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

[2] The continuous monitor shall meet the following specifications:

[a] A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each fifteen seconds, and computes and records the average value at least every sixty seconds; and

[b] The rolling average for the selected averaging period is defined as the arithmetic mean of one-hour block averages for the averaging period. A one-hour block average is the arithmetic mean of the one-minute averages recorded during the sixty-minute period beginning at one minute after the beginning of preceding clock hour; and

[3] The operating limit for the feed rate of each metal shall be established based on compliance test data as the average overall test runs of the highest hourly rolling average feed rate for each run.

(d) Feed rate limits for metals, total chloride and chlorine, and ash. Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (for example, metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of subparagraphs a through c.

(5) Certification of compliance statement. The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of subsection 3 of section 33.1-24-05-528 are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to paragraph 4 of subdivision d of subsection 3 of section 33.1-24-05-528 are enforceable limits at which the facility can legally

operate during interim status until a revised certification of compliance is submitted."

e. Special requirements for hydrocarbon monitoring systems. When an owner or operator is required to comply with the hydrocarbon controls provided by subsection 3 of section 33.1-24-05-529 or subparagraph d of paragraph 1 of subdivision e of subsection 1, a conditioned gas monitoring system may be used in conformance with specifications provided in appendix XXIV of chapter 33.1-24-05 provided that the owner or operator submits a certification of compliance without using extensions of time provided by subdivision g.

f. Special operating requirements for industrial furnaces that recycle collected particulate matter. Owners and operators of industrial furnaces that recycle back into the furnace particulate matter from the air pollution control system must:

(1) When complying with the requirements of subparagraph a of paragraph 2 of subdivision c, comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in appendix XXIV of chapter 33.1-24-05; and

(2) When complying with the requirements of subparagraph b of paragraph 2 of subdivision c, comply with the operating requirements prescribed by that subparagraph.

g. Extensions of time.

(1) If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of sections 33.1-24-05-529, 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532 by August 21, 1992, an owner or operator must either:

(a) Stop burning hazardous waste and begin closure activities under subsection 12 for the hazardous waste portion of the facility;

(b) Limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for compliance testing) a total period of seven hundred twenty hours for the period of time beginning August 21, 1992, submit a notification to the department by August 21, 1992, stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

(c) Obtain a case-by-case extension of time under paragraph 2.

(2) The owner or operator may request a case-by-case extension of time to extend any time limit provided by this subsection if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

(a) In granting an extension, the department may apply conditions as the facts warrant to ensure timely compliance with the requirements of this section and that the facility operates in a manner that does not pose a hazard to human health and the environment;

(b) When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provision of subsection 6 of section 33.1-24-05-529 and to obtain a hazardous waste operating permit because the facility cannot meet the hydrocarbon limit of subsection 3 of section 33.1-24-05-529:

[1] The department shall, in considering whether to grant the extension:

[a] Determine whether the owner and operator have submitted in a timely manner a complete part B permit application that includes information required under subdivision ff of subsection 2 of section 33.1-24-06-17; and

[b] Consider whether the owner or operator have made a good-faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of subsection 5 of section 33.1-24-05-529 and the controls on particulate matter, metals, and hydrogen chloride and chlorine.

[2] If an extension is granted, the department shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on carbon monoxide and hydrocarbon that, based on available information, including information in the part B permit application, are baseline carbon monoxide and hydrocarbon levels as defined by subdivision a of subsection 6 of section 33.1-24-05-529.

h. Revised certification of compliance. The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) under the following procedures:

(1) Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of seven hundred twenty hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of sections 33.1-24-05-529 through 33.1-24-05-532;

(2) At least thirty days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the department and submit the following information:

(a) Identification number, and facility name, contact person, telephone number, and address;

(b) Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;

(c) A determination that when operating under the revised operating conditions, the applicable emissions standards of sections 33.1-24-

05-529 through 33.1-24-05-532 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under subdivision b of subsection 2; and

(d) Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of sections 33.1-24-05-529, 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532 when operating under revised operating conditions. The protocol shall include a schedule of pretesting and compliance testing. If the owner or operator revises the scheduled date for the compliance test, the owner or operator shall notify the department in writing at least thirty days prior to the revised date of the compliance test;

(3) Conduct a compliance test under the revised operating conditions and the protocol submitted to the department to determine compliance with the applicable emissions standards of sections 33.1-24-05-529, 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532; and

(4) Submit a revised certification of compliance under subdivision d.

4. **Periodic recertifications.** The owner or operator must conduct compliance testing and submit to the department a recertification of compliance under provisions of subsection 3 within five years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, the owner or operator must comply with the requirements of subdivision h of subsection 3.

5. **Noncompliance with certification schedule.** If the owner or operator does not comply with the interim status compliance schedule provided by subsections 2 through 4, hazardous waste burning must terminate on the date that the deadline is missed, closure activities must begin under subsection 12, and hazardous waste burning may not resume except under an operating permit issued under subsection 4 of section 33.1-24-06-19. For purposes of compliance with the closure provisions of subsection 12 and subsection 5 of section 33.1-24-06-16 the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

6. **Startup and shutdown.** Hazardous waste (except waste fed solely as an ingredient under the tier I (or adjusted tier I) feed rate screening limits for metals and chloride/chlorine) must not be fed into the device during startup and shutdown of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

7. **Automatic waste feed cutoff.** During the compliance test required by subdivision c of subsection 3, and upon certification of compliance under subsection 3, a boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in paragraphs 1 and 5 through 13 of subdivision a of subsection 3 deviate from those established in the certification of compliance. In addition:

a. To minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test must be maintained while hazardous waste or

hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:

- (1) If compliance with the combustion chamber temperature limit is based on an hourly rolling average, the minimum temperature during the compliance test is considered to be the average overall runs of the lowest hourly rolling average for each run; or
- (2) If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and

b. Operating parameters limited by the certification of compliance must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

8. **Fugitive emissions.** Fugitive emissions must be controlled by:

- a. Keeping the combustion zone totally sealed against fugitive emissions;
- b. Maintaining the combustion zone pressure lower than atmospheric pressure; or
- c. An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

9. **Changes.** A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

10. **Monitoring and inspections.**

a. The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:

- (1) Feed rates and composition of hazardous waste, other fuels, and industrial furnace feedstocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance.
- (2) Carbon monoxide, oxygen, and if applicable, hydrocarbons, on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with the operating limits specified in the certification of compliance. Carbon monoxide, hydrocarbon, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in appendix XXIV of chapter 33.1-24-05.
- (3) Upon the request of the department, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feed stocks as appropriate) and

the stack gas emissions must be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of sections 33.1-24-05-529 through 33.1-24-05-532.

b. The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, et cetera) must be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

c. The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least once every thirty days.

d. These monitoring and inspection data must be recorded and the records must be placed in the operating log.

11. **Recordkeeping.** The owner or operator must keep in the operating record of the facility all information and data required by this section for five years.

12. **Closure.** At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace and must comply with the applicable standards of subsection 5 of section 33.1-24-06-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-16; S.L. 2017, ch. 199, § 19

33.1-24-05-529. Standards to control organic emissions.

1. Destruction and removal efficiency standard.

a. General. Except as provided in subdivision c, a boiler or industrial furnace burning hazardous waste must achieve a destruction and removal efficiency of 99.99 percent for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99 percent destruction and removal efficiency must be demonstrated during a trial burn for each principal organic hazardous constituent designated (under subdivision b) in its permit for each waste feed. Destruction and removal efficiency is determined for each principal organic hazardous constituent from the following equation:

$$\text{destruction and removal efficiency} = \left(1 - \frac{W_{out}}{W_{in}}\right) \times 100$$

where:

W_{in} = Mass feed rate of one principal organic hazardous constituent in the hazardous waste fired to the boiler or industrial furnace; and

W_{out} = Mass emission rate of the same principal organic hazardous constituent present in stack gas prior to release to the atmosphere.

-
- b. Designation of principal organic hazardous constituents. Principal organic hazardous constituents are those compounds for which compliance with the destruction and removal efficiency requirements shall be demonstrated in a trial burn in conformance with procedures prescribed in subsection 4 of section 33.1-24-06-19. One or more principal organic hazardous constituents shall be designated by the department for each waste feed to be burned. Principal organic hazardous constituents shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with part B of the permit application. Principal organic hazardous constituents are most likely to be selected from among those compounds listed in appendix V of chapter 33.1-24-02 that are also present in the normal waste feed. However, if the applicant demonstrates to the department's satisfaction that a compound not listed in appendix V of chapter 33.1-24-02 or not present in the normal waste feed is a suitable indicator of compliance with the destruction and removal efficiency requirements, that compound may be designated as a principal organic hazardous constituent. Such principal organic hazardous constituents need not be toxic or organic compounds.
-
- c. Dioxin-listed waste. A boiler or industrial furnace burning hazardous waste containing (or derived from) hazardous waste numbers F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency of 99.9999 percent for each principal organic hazardous constituent designated (under subdivision b) in its permit. This performance must be demonstrated on principal organic hazardous constituents that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. Destruction and removal efficiency is determined for each principal organic hazardous constituent from the equation in subdivision a. In addition, the owner or operator of the boiler or industrial furnace must notify the department of intent to burn hazardous waste numbers F020, F021, F022, F023, F026, or F027.
-
- d. Automatic waiver of destruction and removal efficiency trial burn. Owners and operators of boilers operated under the special operating requirements provided by section 33.1-24-05-535 are considered to be in compliance with the destruction and removal efficiency standard of subdivision a and are exempt from the destruction and removal efficiency trial burn.
-
- e. Low risk waste. Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the requirements of subsection 1 of section 33.1-24-05-534 are considered to be in compliance with the destruction and removal efficiency standard of subdivision a and are exempt from the destruction and removal efficiency trial burn.

2. Carbon monoxide standard.

-
- a. Except as provided in subsection 3, the stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste cannot exceed one hundred parts per million by volume on an hourly rolling average basis

(for example, over any sixty-minute period), continuously corrected to seven percent oxygen, dry gas basis.

- b. Carbon monoxide and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix XXIV of chapter 33.1-24-05.
- c. Compliance with the one hundred parts per million by volume carbon monoxide limit must be demonstrated during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). To demonstrate compliance, the highest hourly rolling average carbon monoxide level during any valid run of the trial burn or compliance test must not exceed one hundred parts per million by volume.

3. Alternative carbon monoxide standard.

- a. The stack gas concentration of carbon monoxide from a boiler or industrial furnace burning hazardous waste may exceed the one hundred parts per million by volume limit provided that stack gas concentrations of hydrocarbons do not exceed twenty parts per million by volume, except as provided by subsection 6 for certain industrial furnaces.
- b. Hydrocarbon limits must be established under this section on an hourly rolling average basis (for example, over any sixty-minute period), reported as propane, and continuously corrected to seven percent oxygen, dry gas basis.
- c. Hydrocarbon shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in appendix XXIV of chapter 33.1-24-05. Carbon monoxide and oxygen shall be continuously monitored in conformance with subdivision b of subsection 2.
- d. The alternative carbon monoxide standard is established based on carbon monoxide data during the trial burn (for a new facility) and the compliance test (for an interim status facility). The alternative carbon monoxide standard is the average overall valid runs of the highest hourly average carbon monoxide level for each run. The carbon monoxide limit is implemented on an hourly rolling average basis, and continuously corrected to seven percent oxygen, dry gas basis.

4. Special requirements for furnaces. Owners and operators of industrial furnaces (for example, kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see paragraph 2 of subdivision e of subsection 1 of section 33.1-24-05-528) at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits provided by subsection 3 or 6 irrespective of whether stack gas carbon monoxide concentrations meet the one hundred parts per million by volume limit of subsection 2.

5. Controls for dioxins and furans. Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of four hundred fifty degrees to seven hundred fifty degrees Fahrenheit [232.2 to 398.9 degrees Celsius], and industrial furnaces operating under an alternative hydrocarbon limit established under subsection 6 must conduct a

site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual exceeding one in one hundred thousand:

- a. During the trial burn (for new facilities or an interim status facility applying for a permit) or compliance test (for interim status facilities), determine emission rates of the tetra-octa congeners of chlorinated dibenzo-p-dioxins and dibenzofurans (CDDs/CDFs) using method 0023A, "Sampling Method for Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans Emissions from Stationary Sources", environmental protection agency publication SW-846, incorporated by reference in section 33.1-24-01-05;
- b. Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra-octa chlorinated dibenzo-p-dioxins and dibenzofurans congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in appendix XXIV of chapter 33.1-24-05. Multiply the emission rates of chlorinated dibenzo-p-dioxins and dibenzofurans congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;
- c. Conduct dispersion modeling using methods recommended in appendix W of 40 CFR part 51 ("Guidelines on Air Quality Models (Revised)" (1986) and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure", provided in appendix XXIV, or in "Screening Procedures for Estimating Air Quality Impact of Stationary Sources", revised as incorporated by reference in section 33.1-24-01-05 to predict the maximum annual average offsite ground level concentration of 2,3,7,8-TCDD equivalents determined under subdivision b. The maximum annual average concentration must be used when a person resides onsite; and
- d. The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in appendix XX of chapter 33.1-24-05 (2.2×10^{-7}) shall not exceed 1.0.

6. Monitoring carbon monoxide and hydrocarbon in the bypass duct of a cement kiln. Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by subsections 2 through 4 by monitoring in the bypass duct provided that:

- a. Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and
- b. The bypass duct diverts a minimum of ten percent of kiln off-gas into the duct.

7. Use of emissions test data to demonstrate compliance and establish operating limits. Compliance with the requirements of this section must be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the carbon monoxide and hydrocarbon limits of this section or to establish alternative carbon monoxide or hydrocarbon limits under this section must be obtained during the time that destruction and removal efficiency testing, and where applicable, CCD/CDF testing under subsection 5 and comprehensive organic emissions testing under subsection 6 is conducted.

8. **Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33.1-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33.1-24-06-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-16; S.L. 2017, ch. 199, § 19

33.1-24-05-530. Standards to control particulate matter.

1. A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of one hundred eighty milligrams per dry standard cubic meter [0.08 grains per dry standard cubic foot] after correction to a stack gas concentration of seven percent oxygen, using procedures prescribed in 40 CFR part 60, appendix A, methods 1 through 5, and appendix XXIV of chapter 33.1-24-05.
2. An owner or operator meeting the requirements of subsection 2 of section 33.1-24-05-534 for the low risk waste exemption is exempt from the particulate matter standard.
3. Oxygen correction.
 - a. Measured pollutant levels must be corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times 14 / (E - Y)$$

where:

P_c is the corrected concentration of the pollutant in the stack gas;

P_m is the measured concentration of the pollutant in the stack gas;

E is the oxygen concentration on a dry basis in the combustion air fed to the device;
and

Y is the measured oxygen concentration on a dry basis in the stack.

- b. For devices that feed normal combustion air, E will equal twenty-one percent. For devices that feed oxygen-enriched air for combustion (that is, air with an oxygen concentration exceeding twenty-one percent), the value of E will be the concentration of oxygen in the enriched air.
 - c. Compliance with all emission standards provided by sections 33.1-24-05-525 through 33.1-24-05-549 must be based on correcting to seven percent oxygen using this procedure.
4. For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33.1-24-05-527) will be regarded as compliance

with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33.1-24-06-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-05-531. Standards to control metals emission.

1. **General.** The owner or operator must comply with the metals standards provided by subsections 2, 3, 4, 5, or 6 for each metal listed in subsection 2 that is present in the hazardous waste at detectable levels by using appropriate analytical procedures.

2. **Tier I feed rate screening limits.** Feed rate screening limits for metals are specified in appendix XVI as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in subdivision g.

a. **Noncarcinogenic metals.** The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed the screening limits specified in appendix XVI of chapter 33.1-24-05.

(1) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:

(a) An hourly rolling average as defined in subparagraph b of paragraph 1 of subdivision f of subsection 5 of section 33.1-24-05-527; or

(b) An instantaneous limit not to be exceeded at any time.

(2) The feed rate screening limit for lead is based on one of the following:

(a) An hourly rolling average as defined in subparagraph b of paragraph 1 of subdivision f of subsection 5 of section 33.1-24-05-527;

(b) An averaging period of two to twenty-four hours as defined in paragraph 2 of subdivision f of subsection 5 of section 33.1-24-05-527 with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed on an hourly rolling average basis; or

(c) An instantaneous limit not to be exceeded at any time.

b. **Carcinogenic metals.**

(1) The feed rates of arsenic, cadmium, beryllium, and chromium in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks shall not exceed values derived from the screening limits specified in appendix XVI of chapter 33.1-24-05. The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the

feed rate screening limit specified in appendix XVI of chapter 33.1-24-05 shall not exceed 1.0, as provided by the following equation:

$$\frac{\sum_{i=1}^n \frac{AFR_{(i)}}{FRSL_{(i)}}}{\sum_{i=1}^n \frac{AFR_{(i)}}{FRSL_{(i)}}} < 1.0$$

where:

n = number of carcinogenic metals

AFR = actual feed rate to the device for metal "i"

FRSL = feed rate screening limit provided by appendix XVI of chapter 33.1-24-05 for metal "i".

(2) The feed rate screening limits for the carcinogenic metals are based on either:

(a) An hourly rolling average; or

(b) An averaging period of two to twenty-four hours as defined in paragraph 2 of subdivision f of subsection 5 of section 33.1-24-05-527 with an instantaneous feed rate limit not to exceed ten times the feed rate that would be allowed in an hourly rolling average basis.

c. Terrain-adjusted effective stack height (TESH).

(1) The terrain-adjusted effective stack height is determined according to the following equation:

$$\underline{TESH = H_a + H_1 - T_r}$$

where:

H_a = Actual physical stack height

H₁ = Plume rise as determined from appendix XXI of chapter 33.1-24-05 as a function of stack flow rate and stack gas exhaust temperature.

T_r = Terrain rise within five kilometers of the stack.

(2) The stack height (H_a) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).

(3) If the terrain-adjusted effective stack height for a particular facility is not listed in the table in the appendices, the nearest lower terrain-adjusted effective stack height listed in the table shall be used. If the terrain-adjusted effective stack height is four meters or less, a value of four meters shall be used.

d. Terrain type. The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within five kilometers of the stack equals or exceeds the elevation of the physical stack height (H_a) is considered to be in complex terrain and the screening

limits for complex terrain apply. Terrain measurements are to be made from United States geological survey 7.5-minute topographic maps of the area surrounding the facility.

e. Land use. The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in appendix XXIV or XXV of chapter 33.1-24-05 shall be used.

f. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a hazardous waste operating permit or interim status controls must comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

$$K = HVT$$

where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate (m³/second); and

T = exhaust temperature (°Kelvin).

The stack with the lowest value of K is the worst-case stack.

g. Criteria for facilities not eligible for screening limits. If any criteria below are met, the tier I (and tier II) screening limits do not apply. Owners and operators of such facilities must comply with either the tier III standards provided by subsection 4 or with the adjusted tier I feed rate screening limits provided by subsection 5.

(1) The device is located in a narrow valley less than one kilometer wide;

(2) The device has a stack taller than twenty meters and is located such that the terrain rises to the physical height within one kilometer of the facility;

(3) The device has a stack taller than twenty meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;

(4) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or

(5) The department determines that standards based on site-specific dispersion modeling are required.

h. Implementation. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate screening limits are not exceeded.

3. Tier II emission rate screening limits. Emission rate screening limits are specified in appendix XVI of chapter 33.1-24-05 as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in subdivision g of subsection 2.

a. Noncarcinogenic metals. The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in appendix XVI of chapter 33.1-24-05.

b. Carcinogenic metals. The emission rates of arsenic, cadmium, beryllium, and chromium shall not exceed values derived from the screening limits specified in appendix XVI of chapter 33.1-24-05. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in appendix XVI of chapter 33.1-24-05 shall not exceed 1.0, as provided by the following equation:

$$\frac{\sum_{i=1}^n \frac{AER_{(i)}}{ERSL_{(i)}}}{\sum_{i=1}^n ERSL_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

AER = actual emission rate for metal "i"

ERSL = emission rate screening limit provided by appendix XVI for metal "i".

c. Implementation. The emission rate limits must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs 1 and 2 of subdivision a of subsection 2 and paragraph 2 of subdivision b of subsection 2. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under section 33.1-24-05-527 or 33.1-24-05-528 are not exceeded.

d. Definitions and limitations. The definitions and limitations provided by subsection 2 for the following terms also apply to the tier II emission rate screening limits provided by this subsection: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

e. Multiple stacks.

(1) Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to

controls on metals emissions under a hazardous waste operating permit or interim status controls must comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(2) The worst-case stack is determined by procedures provided in subdivision f of subsection 2.

(3) For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

4. Tier III and adjusted tier I site-specific risk assessment. The requirements of this subsection apply to facilities complying with either the tier III or adjusted tier I controls, except where specified otherwise.

a. General. Conformance with the tier III metals controls must be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the tier III or adjusted tier I metals controls must be determined by air dispersion modeling to predict the maximum annual average offsite ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

b. Acceptable ambient levels. Appendices XIX and XX of chapter 33.1-24-05 list the acceptable ambient levels for purposes of this rule. Reference air concentrations are listed for the noncarcinogenic metals and 10^{-5} risk-specific doses are listed for the carcinogenic metals. The risk-specific dose for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the risk-specific dose as described in subdivision c.

c. Carcinogenic metals. For the carcinogenic metals arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average offsite ground level concentrations (except that onsite concentrations must be considered if a person resides onsite) to the risk-specific dose for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation:

$$\sum_{i=1}^n \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk - Specific Dose}_{(i)}} \leq 1.0$$

where:

n = number of carcinogenic metals

d. Noncarcinogenic metals. For the noncarcinogenic metals, the predicted maximum annual average offsite ground level concentration for each metal shall not exceed the reference air concentration.

e. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a hazardous waste operating permit or

interim status controls must conduct emissions testing (except that facilities complying with adjusted tier I controls need not conduct emissions testing) and dispersion modeling to demonstrate that the aggregate emissions from all such onsite stacks do not result in an exceedance of the acceptable ambient levels.

f. Implementation. Under tier III, the metals controls must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs 1 and 2 of subdivision a of subsection 2 and paragraph 2 of subdivision b of subsection 2. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under section 33.1-24-05-527 or 33.1-24-05-528 are not exceeded.

5. **Adjusted tier I feed rate screening limits.** The owner or operator may adjust the feed rate screening limits provided by appendix XVI of chapter 33.1-24-05 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by appendices XIX and XX of chapter 33.1-24-05 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in subdivision b of subsection 2.

6. **Alternative implementation approaches.**

a. The department may approve on a case-by-case basis approaches to implement the tier II or tier III metals emission limits provided by subsection 3 or 4 alternative to monitoring the feed rate of metals in each feedstream.

b. The emission limits provided by subsection 4 must be determined as follows:

(1) For each noncarcinogenic metal, by back-calculating from the reference air concentration provided in appendix XIX of chapter 33.1-24-05 to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with subsection 8; and

(2) For each carcinogenic metal by:

(a) Back-calculating from the risk-specific dose provided in appendix XX of chapter 33.1-24-05 to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with subsection 8; and

(b) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by subparagraph a such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by that subparagraph does not exceed 1.0.

7. **Emission testing.**

- a. General. Emission testing for metals shall be conducted using method 0060, "Determinations of Metals in Stack Emissions", environmental protection agency publication SW-846, incorporated by reference in section 33.1-24-01-05.
 - b. Hexavalent chromium. Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in method 0061, "Determination of Hexavalent Chromium Emissions from Stationary Sources", environmental protection agency publication SW-846, incorporated by reference in section 33.1-24-01-05.
8. **Dispersion modeling.** Dispersion modeling required under this section shall be conducted according to methods recommended in appendix W of 40 CFR part 51 ("Guidelines on Air Quality Models (Revised)" (1986) and its supplements), the "Hazardous Waste Combustion Air Quality Screening Procedure" provided in appendix XXIV of chapter 33.1-24-05, or in "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, revised" (incorporated by reference in section 33.1-24-01-05) to predict the maximum annual average offsite ground level concentration. However, onsite concentrations must be considered when a person resides onsite.
9. **Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33.1-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33.1-24-06-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-05-532. Standards to control hydrogen chloride (HCl) and chlorine gas (Cl₂) emissions.

- 1. **General.** The owner or operator must comply with the hydrogen chloride and chlorine controls provided by subsection 2, 3, or 5.
- 2. **Screening limits.**
 - a. Tier I feed rate screening limits. Feed rate screening limits are specified for total chlorine in appendix XVII as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks, shall not exceed the levels specified.
 - b. Tier II emission rate screening limits. Emission rates screening limits for hydrogen chloride and chlorine are specified in appendix XVIII as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of hydrogen chloride and chlorine shall not exceed the levels specified.

c. Definitions and limitations. The definitions and limitations provided by subsection 2 of section 33.1-24-05-531 for the following terms also apply to the screening limits provided by this subsection: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

d. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine emissions under a hazardous waste operating permit or interim status controls must comply with the tier I and tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(1) The worst-case stack is determined by procedures provided in subdivision f of subsection 2 of section 33.1-24-05-531.

(2) Under tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.

(3) Under tier II, the total emissions of hydrogen chloride and chlorine from all subject stacks shall not exceed the screening limit for the worst-case stack.

3. Tier III site-specific risk assessments.

a. General. Conformance with the tier III controls must be demonstrated by emissions testing to determine the emission rate for hydrogen chloride and chlorine, air dispersion modeling to predict the maximum annual average offsite ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

b. Acceptable ambient levels. Appendix XIX of chapter 33.1-24-05 lists the reference air concentrations for hydrogen chloride (7 micrograms per cubic meter) and chlorine (0.4 micrograms per cubic meter).

c. Multiple stacks. Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on hydrogen chloride or chlorine emissions under a hazardous waste operating permit or interim status controls must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such onsite stacks do not result in an exceedance of the acceptable ambient levels for hydrogen chloride and chlorine.

4. Averaging periods. The hydrogen chloride and chlorine controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feedstocks. Under tier I, the feed rate of total chloride and chlorine is limited to the tier I screening limits. Under tier II and tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate limits are based on either:

a. An hourly rolling average as defined in subdivision f of subsection 5 of section 33.1-24-05-527; or

b. An instantaneous basis not to be exceeded at any time.

5. **Adjusted tier I feed rate screening limits.** The owner or operator may adjust the feed rate screening limit provided by appendix XVII of chapter 33.1-24-05 to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for chlorine provided by appendix XIX of chapter 33.1-24-05 using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted tier I feed rate screening limit.
6. **Emissions testing.** Emissions testing for hydrogen chloride and chlorine shall be conducted using the procedures described in methods 0050 or 0051, environmental protection agency publication SW-846, incorporated by reference in section 33.1-24-01-05.
7. **Dispersion modeling.** Dispersion modeling shall be conducted according to the provisions of subsection 8 of section 33.1-24-05-531.
8. **Enforcement.** For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under section 33.1-24-05-527) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and reissuance of a permit under section 33.1-24-06-12.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-05-533. Small quantity onsite burner exemption.

1. **Exempt quantities.** Owners and operators of facilities that burn hazardous waste in an onsite boiler or industrial furnace are exempt from the requirements of sections 33.1-24-05-525 through 33.1-24-05-549 provided that:
 - a. The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain-adjusted effective stack height as defined in subdivision c of subsection 2 of section 33.1-24-05-531:

<u>Exempt Quantities for Small Quantity Burner Exemption</u>			
<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>	<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>
<u>0 to 3.9</u>	<u>0</u>	<u>40.0 to 44.9</u>	<u>210</u>
<u>4.0 to 5.9</u>	<u>13</u>	<u>45.0 to 49.9</u>	<u>260</u>
<u>6.0 to 7.9</u>	<u>18</u>	<u>50.0 to 54.9</u>	<u>330</u>
<u>8.0 to 9.9</u>	<u>27</u>	<u>55.0 to 59.9</u>	<u>400</u>

<u>Exempt Quantities for Small Quantity Burner Exemption</u>			
<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>	<u>Terrain-Adjusted Effective Stack Height of Device (Meters)</u>	<u>Allowable Hazardous Waste Burning Rate (Gallons/Month)</u>
<u>10.0 to 11.9</u>	<u>40</u>	<u>60.0 to 64.9</u>	<u>490</u>
<u>12.0 to 13.9</u>	<u>48</u>	<u>65.0 to 69.9</u>	<u>610</u>
<u>14.0 to 15.9</u>	<u>59</u>	<u>70.0 to 74.9</u>	<u>680</u>
<u>16.0 to 17.9</u>	<u>69</u>	<u>75.0 to 79.9</u>	<u>760</u>
<u>18.0 to 19.9</u>	<u>76</u>	<u>80.0 to 84.9</u>	<u>850</u>
<u>20.0 to 21.9</u>	<u>84</u>	<u>85.0 to 89.9</u>	<u>960</u>
<u>22.0 to 23.9</u>	<u>93</u>	<u>90.0 to 94.9</u>	<u>1,100</u>
<u>24.0 to 25.9</u>	<u>100</u>	<u>95.0 to 99.9</u>	<u>1,200</u>
<u>26.0 to 27.9</u>	<u>110</u>	<u>100.0 to 104.9</u>	<u>1,300</u>
<u>28.0 to 29.9</u>	<u>130</u>	<u>105.0 to 109.9</u>	<u>1,500</u>
<u>30.0 to 34.9</u>	<u>140</u>	<u>110.0 to 114.9</u>	<u>1,700</u>
<u>35.0 to 39.9</u>	<u>170</u>	<u>115.0 or greater</u>	<u>1,900</u>

- b. The maximum hazardous waste firing rate does not exceed at any time one percent of the total fuel requirements for the device (hazardous waste plus other fuel) on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste;
- c. The hazardous waste has a minimum heating value of five thousand British thermal units per pound as generated; and
- d. The hazardous waste fuel does not contain (and is not derived from) hazardous waste number F020, F021, F022, F023, F026, or F027.
2. **Mixing with nonhazardous fuels.** If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with subsection 1.
3. **Multiple stacks.** If an owner or operator burns hazardous waste in more than one onsite boiler or industrial furnace exempt under this section, the quantity limits provided by subdivision a of subsection 1 are implemented according to the following equation:

$$\sum_{i=1}^n \frac{\text{Actual Quantity Burned}_{(i)}}{\text{Allowable Quantity Burned}_{(i)}} \leq 1.0$$

where:

n = number of stacks;

Actual quantity burned means the waste quantity burned per month in device "i";

Allowable quantity burned means the maximum allowable exempt quantity for stack "i" from the table in subdivision a of subsection 1.

Note: Hazardous wastes that are subject to the special requirements for small quantity generators under section 33.1-24-02-05 may be burned in an offsite device under the exemption provided by section 33.1-24-05-533, but must be included in the quantity determination for the exemption.

4. **Notification requirements.** The owner or operator of facilities qualifying for the small quantity burner exemption under this section must provide a one-time signed, written notice to the department indicating the following:

a. The combustion unit is operating as a small quantity burner of hazardous waste;

b. The owner and operator are in compliance with the requirements of this section; and

c. The maximum quantity of hazardous waste that the facility may burn per month as provided by subdivision a of subsection 1.

5. **Recordkeeping requirements.** The owner or operator must maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits. At a minimum, these records must indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-534. Low risk waste exemption.

1. **Waiver of destruction and removal efficiency standard.** The destruction and removal efficiency standard of subsection 1 of section 33.1-24-05-529 does not apply if the boiler or industrial furnace is operated in conformance with subdivision a of subsection 1 and the owner or operator demonstrates by procedures prescribed in subdivision b of subsection 1 that the burning will not result in unacceptable adverse health effects.

a. The device shall be operated as follows:

(1) A minimum of fifty percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the department on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The fifty percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(2) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of eight thousand British thermal units per pound;

- (3) The hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and
- (4) The device operates in conformance with the carbon monoxide controls provided by subdivision a of subsection 2 of section 33.1-24-05-529. Devices subject to the exemption provided by this section are not eligible for the alternative carbon monoxide controls provided by subsection 3 of section 33.1-24-05-529.
- b. Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health effects are as follows:
- (1) Identify and quantify those nonmetal compounds listed in appendix V of chapter 33.1-24-02 that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained.
- (2) Calculate reasonable, worst-case emission rates for each constituent identified in paragraph 1 by assuming the device achieves 99.9 percent destruction and removal efficiency. That is, assume that 0.1 percent of the mass weight of each constituent fed to the device is emitted.
- (3) For each constituent identified in paragraph 1, use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.
- (a) Dispersion modeling shall be conducted using methods specified in subsection 8 of section 33.1-24-05-531.
- (b) Owners and operators of facilities with more than one onsite stack from a boiler or industrial furnace that is exempt under this section must conduct dispersion modeling of emissions from all stacks exempt under this section to predict ambient levels prescribed by this subdivision.
- (4) Ground level concentrations of constituents predicted under paragraph 3 must not exceed the following levels:
- (a) For the noncarcinogenic compounds listed in appendix XIX of chapter 33.1-24-05, the levels established in appendix XIX of chapter 33.1-24-05;
- (b) For the carcinogenic compounds listed in appendix XX of chapter 33.1-24-05, the sum for all constituents of the ratios of the actual ground level concentration to the level established in appendix XX of chapter 33.1-24-05 cannot exceed 1.0; and
- (c) For constituents not listed in appendix XIX or XX of chapter 33.1-24-05, 0.1 micrograms per cubic meter.
2. **Waiver of particulate matter standard.** The particulate matter standard of section 33.1-24-05-530 does not apply if:
- a. The destruction and removal efficiency standard is waived under subsection 1; and

- b. The owner or operator complies with the tier I or adjusted tier I metals feed rate screening limits provided by subsection 2 or 5 of section 33.1-24-05-531.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-535. Waiver of destruction and removal efficiency trial burn for boilers.

Boilers that operate under the special requirements of this section, and that do not burn hazardous waste containing (or derived from) hazardous waste number F020, F021, F022, F023, F026, or F027, are considered to be in conformance with the destruction and removal efficiency standard of subsection 1 of section 33.1-24-05-529, and a trial burn to demonstrate destruction and removal efficiency is waived. When burning hazardous waste:

1. A minimum of fifty percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the department on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The fifty percent primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;
2. Boiler load shall not be less than forty percent. Boiler load is the ratio at any time of the total heat input to the maximum design heat input;
3. Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of eight thousand British thermal units per pound, and each material fired in a burner where hazardous waste is fired must have a heating value of at least eight thousand British thermal units per pound, as-fired;
4. The device shall operate in conformance with the carbon monoxide standard provided by subdivision a of subsection 2 of section 33.1-24-05-529. Boilers subject to the waiver of the destruction and removal efficiency trial burn provided by this section are not eligible for the alternative carbon monoxide standard provided by subsection 3 of section 33.1-24-05-529;
5. The boiler must be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and
6. The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under the following conditions:
 - a. Viscosity. The viscosity of the hazardous waste fuel as-fired shall not exceed three hundred SSU;
 - b. Particle size. When a high pressure air or steam atomizer, low pressure atomizer, or mechanical atomizer is used, seventy percent of the hazardous waste fuel must pass through a 200 mesh (74 micron) screen, and when a rotary cup atomizer is used, seventy percent of the hazardous waste must pass through a 100 mesh (150 micron) screen;

- c. Mechanical atomization systems. Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of the fuel;
- d. Rotary cup atomization systems. Fuel flow rate through a rotary cup atomization system must be maintained within the design range taking into account the viscosity and volatility of the fuel.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-536. Standards for direct transfer.

1. **Applicability.** The regulations in this section apply to owners and operators of boilers and industrial furnaces subject to section 33.1-24-05-527 or 33.1-24-05-528 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

2. Definitions.

a. When used in this section, the following terms have the meanings given below:

- (1) Direct transfer equipment means any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (for example, transport vehicle) and a boiler or industrial furnace.
- (2) Container means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (for example, tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

b. This section references several requirements provided in sections 33.1-24-05-89 through 33.1-24-05-117 and subsection 5 of section 33.1-24-06-16. For purposes of this section, the term "tank systems" in those referenced requirements means direct transfer equipment as defined in subdivision a.

3. General operating requirements.

- a. No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.
- b. Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.
- c. The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:
 - (1) Generate extreme heat or pressure, fire, explosion, or violent reaction;

- (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
 - (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - (4) Damage the structural integrity of the container or direct transfer equipment containing the waste;
 - (5) Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by sections 33.1-24-05-529 through 33.1-24-05-632; or
 - (6) Threaten human health or the environment.
- d. Hazardous waste shall not be placed in direct transfer equipment if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.
 - e. The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:
 - (1) Spill prevention controls (for example, check valves, dry discount couplings); and
 - (2) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.
4. **Areas where direct transfer vehicles (containers) are located.** Applying the definition of container under this section, owners and operators must comply with the following requirements:
- a. The containment requirements of section 33.1-24-05-94;
 - b. The use and management requirements of sections 33.1-24-05-89 through 33.1-24-05-102 except for sections 33.1-24-05-89, 33.1-24-05-93, and 33.1-24-05-97, and except that in lieu of the special requirements of section 33.1-24-05-95 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code", (1977 or 1981), as incorporated by reference, see section 33.1-24-01-05. The owner or operator must obtain and keep on file at the facility a written certification by the local fire marshal that the installation meets the subject National Fire Protection Association codes; and
 - c. The closure requirements of section 33.1-24-05-97.
5. **Direct transfer equipment.** Direct transfer equipment must meet the following requirements:

a. Secondary containment. Owners and operators shall comply with the secondary containment requirements of section 33.1-24-05-106, except for subsections 1, 4, 5, and 9:

(1) For all new direct transfer equipment, prior to their being put into service; and

(2) For existing direct transfer equipment within two years after August 21, 1991.

b. Requirements prior to meeting secondary containment requirements.

(1) For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with subsection 4 of section 33.1-24-06-02 that attests to the equipment's integrity by August 21, 1992.

(2) This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste or wastes to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

(a) Design standard or standards, if available according to which the direct transfer equipment was constructed;

(b) Hazardous characteristics of the waste or wastes that have been or will be handled;

(c) Existing corrosion protection measures;

(d) Documented age of the equipment, if available, (otherwise, an estimate of the age); and

(e) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.

(3) If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of subsections 1 and 2 of section 33.1-24-05-109.

c. Inspections and recordkeeping.

(1) The owner or operator must inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace:

(a) Overfill/spill control equipment (for example, waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;

(b) The aboveground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (for example, wet spots, dead vegetation); and

- (c) Data gathered from monitoring equipment and leak-detection equipment (for example, pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.
- (2) The owner or operator must inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by subsection 6 of section 33.1-24-05-108.
- (3) Records of inspections made under this subdivision shall be maintained in the operating record at the facility, and available for inspection for at least three years from the date of the inspection.
- d. Design and installation of new ancillary equipment. Owners and operators must comply with the requirements of section 33.1-24-05-105.
- e. Response to leaks or spills. Owners and operators must comply with the requirements of section 33.1-24-05-109.
- f. Closure. Owners and operators must comply with the requirements of section 33.1-24-05-110 except for subdivisions b and d of subsection 3.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-537. Regulation of residues.

A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under subdivision d, g, or h of subsection 2 of section 33.1-24-02-04 unless the device and the owner or operator meet the following requirements:

- 1. The device meets the following criteria:
 - a. Boilers. Boilers must burn at least fifty percent coal on a total heat input or mass input basis, whichever results in the greater mass feed rate or coal;
 - b. Ore or mineral furnaces. Industrial furnaces subject to subdivision g of subsection 2 of section 33.1-24-02-04 must process at least fifty percent by weight normal, nonhazardous raw materials; and
 - c. Cement kilns. Cement kilns must process at least fifty percent by weight normal cement-production raw materials;
- 2. The owner or operator demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:
 - a. Comparison of waste-derived residue with normal residue. The waste-derived residue must not contain appendix V of chapter 33.1-24-02 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the

organic compounds listed in appendix XXIII of chapter 33.1-24-05 that may be generated as products of incomplete combustion. For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8-TCDD equivalent values using the procedure specified in section 4.0 of appendix XXIV of chapter 33.1-24-05.

(1) Normal residue. Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of ten samples representing a minimum of ten days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed twenty-four hours. The upper tolerance limit (at ninety-five percent confidence with a ninety-five percent proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically derived concentrations of the toxic constituents of concern in the normal residue, the statistically derived concentrations must be revised or statistically derived concentrations of toxic constituents in normal residue must be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Beville Residue Determinations" in appendix XXIV of chapter 33.1-24-05;

(2) Waste-derived residue. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each twenty-four-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under paragraph 1. If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a twenty-four-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed twenty-four hours. If more than one sample is analyzed to characterize waste-derived residues generated over a twenty-four-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; or

b. Comparison of waste-derived residue concentrations with health-based limits.

(1) Nonmetal constituents. The concentration of each nonmetal toxic constituent of concern (specified in subdivision a) in the waste-derived residue must not exceed the health-based level specified in appendix XXII of chapter 33.1-24-05, or the level of detection, whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix XXII of chapter 33.1-24-05, then a limit of 0.002 micrograms per kilogram or the level of detection (which must be determined by using appropriate analytical procedures), whichever is higher, must be used. The levels specified in appendix XXII of chapter 33.1-24-05 (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in note 1 of appendix XXII of chapter

33.1-24-05) are administratively stayed under the condition, for those constituents specified in subdivision a, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in section 33.1-24-05-283 for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable department guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by section 33.1-24-05-283 for F039 nonwastewaters. In complying with the section 33.1-24-05-283 F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans;

(2) Metal constituents. The concentration of metals in an extract obtained using the toxicity characteristic leaching procedure of section 33.1-24-02-14 must not exceed the levels specified in appendix XXII of chapter 33.1-24-05; and

(3) Sampling and analysis. Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each twenty-four-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a twenty-four-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed twenty-four hours. If more than one sample is analyzed to characterize waste-derived residues generated over a twenty-four-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; and

3. Records sufficient to document compliance with the provisions must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded:

a. Levels of constituents in appendix V of chapter 33.1-24-02, that are present in waste-derived residues; and

b. If the waste-derived residue is compared with normal residue under subdivision a of subsection 2:

(1) The levels of constituents in appendix V of chapter 33.1-24-02, that are present in normal residues; and

(2) Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-538. [Reserved]

33.1-24-05-539. [Reserved]

33.1-24-05-540. [Reserved]

33.1-24-05-541. [Reserved]

33.1-24-05-542. [Reserved]

33.1-24-05-543. [Reserved]

33.1-24-05-544. [Reserved]

33.1-24-05-545. [Reserved]

33.1-24-05-546. [Reserved]

33.1-24-05-547. [Reserved]

33.1-24-05-548. [Reserved]

33.1-24-05-549. [Reserved]

33.1-24-05-550. Applicability of corrective action management unit (CAMU) regulations.

1. Except as provided in subsection 2, corrective action management units are subject to the requirements of section 33.1-24-05-552.
2. Corrective action management units that were approved before April 22, 2002, or for which substantially complete applications (or equivalents) were submitted to the department on or before November 20, 2000, are subject to the requirements in section 33.1-24-05-551 for grandfathered corrective action management units; corrective action management unit waste, activities, and design will not be subject to the standards in section 33.1-24-05-552, so long as the waste, activities, and design remain within the general scope of the corrective action management unit as approved.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-551. Grandfathered corrective action management units (CAMUs).

1. To implement remedies under section 33.1-24-05-58 or Resource Conservation and Recovery Act section 3008(h), or to implement remedies at a permitted facility that is not subject to section 33.1-24-05-58, the department may designate an area at the facility as a corrective action management unit under the requirements of this section. Corrective action management unit means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility. A corrective action management unit must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in

the corrective action management unit originated. One or more corrective action management units may be designated at a facility.

a. Placement of remediation wastes into or within a corrective action management unit does not constitute land disposal of hazardous wastes.

b. Consolidation or placement of remediation wastes into or within a corrective action management unit does not constitute creation of a unit subject to minimum technology requirements.

2. The department may designate a regulated unit as a corrective action management unit in accordance with the following:

a. The department may designate a regulated unit (as defined in subdivision b of subsection 1 of section 33.1-24-05-47) as a corrective action management unit, or may incorporate a regulated unit into a corrective action management unit, if:

(1) The regulated unit is closed or closing, meaning it has begun the closure process under section 33.1-24-05-62; and

(2) Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.

b. The sections 33.1-24-05-47 through 33.1-24-05-88 requirements and the unit-specific requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 that applied to that regulated unit will continue to apply to that portion of the corrective action management unit after incorporation into the corrective action management unit.

3. The department shall designate a corrective action management unit in accordance with the following:

a. The corrective action management unit shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;

b. Waste management activities associated with the corrective action management unit shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

c. The corrective action management unit may include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective than management of such wastes at contaminated areas of the facility;

d. Areas within the corrective action management unit, where wastes remain in place after closure of the corrective action management unit, shall be managed and contained so as to minimize future releases, to the extent practicable;

e. The corrective action management unit shall expedite the timing of remedial activity implementation, when appropriate and practicable;

f. The corrective action management unit shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the

long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the corrective action management unit; and

g. The corrective action management unit shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the corrective action management unit.

4. The owner or operator shall provide sufficient information to enable the department to designate a corrective action management unit in accordance with the criteria in section 33.1-24-05-552.

5. The department shall specify, in the permit or order, requirements for corrective action management units to include the following:

a. The areal configuration of the corrective action management unit.

b. Requirements for remediation waste management to include the specification of applicable design, operation, and closure requirements.

c. Requirements for ground water monitoring that are sufficient to:

(1) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the corrective action management unit; and

(2) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the corrective action management unit in which wastes will remain in place after closure of the corrective action management unit.

d. Closure and postclosure requirements.

(1) Closure of corrective action management units shall:

(a) Minimize the need for further maintenance; and

(b) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

(2) Requirements for closure of corrective action management units shall include the following, as appropriate and as deemed necessary by the department for a given corrective action management unit:

(a) Requirements for excavation, removal, treatment, or containment of wastes;

(b) For areas in which wastes will remain after closure of the corrective action management unit, requirements for capping of such areas; and

- (c) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the corrective action management unit.
- (3) In establishing specific closure requirements for corrective action management units under this subsection, the department shall consider the following factors:
- (a) Corrective action management unit characteristics;
- (b) Volume of wastes which remain in place after closure;
- (c) Potential for releases from the corrective action management unit;
- (d) Physical and chemical characteristics of the waste;
- (e) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and
- (f) Potential for exposure of humans and environmental receptors if releases were to occur from the corrective action management unit.
- (4) Postclosure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.
6. The department shall document the rationale for designating corrective action management units and shall make such documentation available to the public.
7. Incorporation of a corrective action management unit into an existing permit must be approved by the department according to the procedures for department-initiated permit modifications under section 33.1-24-06-12, or according to the permit modification procedures of section 33.1-24-06-14.
8. The designation of a corrective action management unit does not change the department's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-552. Corrective action management unit (CAMU).

1. To implement remedies under section 33.1-24-05-58 or Resource Conservation and Recovery Act section 3008(h), or to implement remedies at a permitted facility that is not subject to section 33.1-24-05-58, the department may designate an area at the facility as a corrective action management unit under the requirements in this section. Corrective action management unit means an area within a facility that is used only for managing corrective action management unit-eligible wastes for implementing corrective action or cleanup at the facility. A corrective action management unit must be

located within the contiguous property under the control of the owner or operator where the wastes to be managed in the corrective action management unit originated. One or more corrective action management units may be designated at a facility.

a. Corrective action management unit-eligible waste means:

(1) All solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, that are managed for implementing cleanup. As-generated wastes (either hazardous or nonhazardous) from ongoing industrial operations at a site are not corrective action management unit-eligible wastes.

(2) Wastes that would otherwise meet the description in paragraph 1 are not "corrective action management unit-eligible wastes" where:

(a) The wastes are hazardous wastes found during cleanup in intact or substantially intact containers, tanks, or other nonland-based units found aboveground, unless the wastes are first placed in the tanks, containers, or nonland-based units as part of cleanup, or the containers or tanks are excavated during the course of cleanup; or

(b) The department exercises the discretion in subdivision b to prohibit the wastes from management in a corrective action management unit.

(3) Notwithstanding paragraph 1, where appropriate, as-generated nonhazardous waste may be placed in a corrective action management unit where such waste is being used to facilitate treatment or the performance of the corrective action management unit.

b. The department may prohibit, where appropriate, the placement of waste in a corrective action management unit where the department has or receives information that such wastes have not been managed in compliance with applicable land disposal treatment standards of sections 33.1-24-05-250 through 33.1-24-05-299, or applicable unit design requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, or applicable unit design requirements under subsection 5 of section 33.1-24-06-16, or that noncompliance with other applicable requirements of article 33.1-24 likely contributed to the release of the waste.

c. Prohibition against placing liquids in corrective action management units.

(1) The placement of bulk or noncontainerized liquid hazardous waste or free liquids contained in hazardous waste (whether or not sorbents have been added) in any corrective action management unit is prohibited except where placement of such wastes facilitates the remedy selected for the waste.

(2) The requirements in subsection 3 of section 33.1-24-05-183 for placement of containers holding free liquids in landfills apply to placement in a corrective action management unit except where placement facilitates the remedy selected for the waste.

- (3) The placement of any liquid which is not a hazardous waste in a corrective action management unit is prohibited unless such placement facilitates the remedy selected for the waste or a demonstration is made pursuant to subsection 5 of section 33.1-24-05-183.
- (4) The absence or presence of free liquids in either a containerized or a bulk waste must be determined in accordance with subsection 2 of section 33.1-24-05-183. Sorbents used to treat free liquids in corrective action management units must meet the requirements of subsection 4 of section 33.1-24-05-183.
- d. Placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute land disposal of hazardous wastes.
- e. Consolidation or placement of corrective action management unit-eligible wastes into or within a corrective action management unit does not constitute creation of a unit subject to minimum technology requirements.
- 2. Requirements for regulated units.
 - a. The department may designate a regulated unit (as defined in subdivision b of subsection 1 of section 33.1-24-05-47) as a corrective action management unit, or may incorporate a regulated unit into a corrective action management unit, if:
 - (1) The regulated unit is closed or closing, meaning it has begun the closure process under section 33.1-24-05-62 or applicable requirements of subsection 5 of section 33.1-24-06-16; and
 - (2) Inclusion of the regulated unit will enhance implementation of effective, protective, and reliable remedial actions for the facility.
 - b. The requirements of sections 33.1-24-05-47 through 33.1-24-05-88 and the unit-specific requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, or applicable requirements of subsection 5 of section 33.1-24-06-16 that applied to the regulated unit will continue to apply to that portion of the corrective action management unit after incorporation into the corrective action management unit.
- 3. The department shall designate a corrective action management unit that will be used for storage or treatment, or both, only in accordance with subsection 6. The department shall designate all other corrective action management units in accordance with the following:
 - a. The corrective action management unit shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;
 - b. Waste management activities associated with the corrective action management unit shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;

- c. The corrective action management unit shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing corrective action management unit-eligible waste is more protective than management of such wastes at contaminated areas of the facility;
 - d. Areas within the corrective action management unit, where wastes remain in place after closure of the corrective action management unit, shall be managed and contained so as to minimize future releases, to the extent practicable;
 - e. The corrective action management unit shall expedite the timing of remedial activity implementation, when appropriate and practicable;
 - f. The corrective action management unit shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the corrective action management unit; and
 - g. The corrective action management unit shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the corrective action management unit.
4. The owner or operator shall provide sufficient information to enable the department to designate a corrective action management unit in accordance with the criteria in this section. This must include, unless not reasonably available, information on:
- a. The origin of the waste and how it was subsequently managed (including a description of the timing and circumstances surrounding the disposal or release, or both);
 - b. Whether the waste was listed or identified as hazardous at the time of disposal or release, or both; and
 - c. Whether the disposal or release, or both, of the waste occurred before or after the land disposal requirements of section 33.1-24-05-250 through 33.1-24-05-299 were in effect for the waste listing or characteristic.
5. The department shall specify, in the permit or order, requirements for corrective action management units to include the following:
- a. The areal configuration of the corrective action management unit.
 - b. Except as provided in subsection 7, requirements for corrective action management unit-eligible waste management to include the specification of applicable design, operation, treatment, and closure requirements.
 - c. Minimum design requirements. Corrective action management units, except as provided in subsection 6, into which wastes are placed must be designed in accordance with the following:
 - (1) Unless the department approves alternate requirements under paragraph 2, corrective action management units that consist of new, replacement, or laterally expanded units must include a composite liner and a leachate collection system that is designed and constructed to maintain less than a

thirty-centimeter depth of leachate over the liner. For purposes of this paragraph, composite liner means a system consisting of two components; the upper component must consist of a minimum thirty mil flexible membrane liner, and the lower component must consist of at least a two-foot layer of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} centimeters per second. Flexible membrane liner components consisting of high density polyethylene must be at least sixty mil thick. The flexible membrane liner component must be installed in direct and uniform contact with the compacted soil component; and

(2) Alternate requirements. The department may approve alternate requirements if:

(a) The department finds that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents into the ground water or surface water at least as effectively as the liner and leachate collection systems in paragraph 1; or

(b) The corrective action management unit is to be established in an area with existing significant levels of contamination, and the department finds that an alternative design, including a design that does not include a liner, would prevent migration from the unit that would exceed long-term remedial goals.

d. Minimum treatment requirements. Unless the wastes will be placed in a corrective action management unit for storage or treatment, or both, only in accordance with subsection 6, corrective action management unit-eligible wastes that, absent this subdivision, would be subject to the treatment requirements of sections 33.1-24-05-250 through 33.1-24-05-299, and that the department determines contain principal hazardous constituents must be treated to the standards specified in paragraph 3.

(1) Principal hazardous constituents are those constituents that the department determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(a) In general, the department will designate as principal hazardous constituents:

[1] Carcinogens that pose a potential direct risk from ingestion or inhalation at the site at or above 10^{-3} ; and

[2] Noncarcinogens that pose a potential direct risk from ingestion or inhalation at the site an order of magnitude or greater over their reference dose.

(b) The department will also designate constituents as principal hazardous constituents, where appropriate, when risks to human health and the environment posed by the potential migration of constituents in wastes to ground water are substantially higher than cleanup levels or goals at the site; when making such a designation, the department may consider such factors as constituent concentrations, and fate and transport characteristics under site conditions.

(c) The department may also designate other constituents as principal hazardous constituents that the department determines pose a risk to human health and the environment substantially higher than the cleanup levels or goals at the site.

(2) In determining which constituents are "principal hazardous constituents", the department must consider all constituents which, absent this subdivision, would be subject to the treatment requirements in sections 33.1-24-05-250 through 33.1-24-05-299.

(3) Waste that the department determines contains principal hazardous constituents must meet treatment standards determined in accordance with paragraph 4 or 5.

(4) Treatment standards for wastes placed in corrective action management units.

(a) For nonmetals, treatment must achieve ninety percent reduction in total principal hazardous constituent concentrations, except as provided by subparagraph c.

(b) For metals, treatment must achieve ninety percent reduction in principal hazardous constituent concentrations as measured in leachate from the treated waste or media (tested according to the toxicity characteristic leaching procedure) or ninety percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by subparagraph c.

(c) When treatment of any principal hazardous constituent to a ninety percent reduction standard would result in a concentration less than ten times the universal treatment standard for that constituent, treatment to achieve constituent concentrations less than ten times the universal treatment standard is not required. Universal treatment standards are identified in section 33.1-24-05-288 table UTS.

(d) For waste exhibiting the hazardous characteristic of ignitability, corrosivity, or reactivity, the waste must also be treated to eliminate these characteristics.

(e) For debris, the debris must be treated in accordance with section 33.1-24-05-285, or by methods or to levels established under subparagraphs a through d or paragraph 5, whichever the department determines is appropriate.

(f) Alternatives to toxicity characteristic leaching procedure. For metal-bearing wastes for which metals removal treatment is not used, the department may specify a leaching test other than the toxicity characteristic leaching procedure (SW-846 method 1311, paragraph 5 of subdivision c of subsection 3 of section 33.1-24-01-05) to measure treatment effectiveness, provided the department determines that an alternative leach testing protocol is appropriate for use, and that the alternative more accurately reflects conditions at the site that affect leaching.

(5) Adjusted standards. The department may adjust the treatment level or method in paragraph 4 to a higher or lower level, based on one or more of the following factors, as appropriate. The adjusted level or method must be protective of human health and the environment:

(a) The technical impracticability of treatment to the levels or by the methods in paragraph 4;

(b) The levels or methods in paragraph 4 would result in concentrations of principal hazardous constituents that are significantly above or below cleanup standards applicable to the site (established either site-specifically, or promulgated under state or federal law);

(c) The views of the affected local community on the treatment levels or methods in paragraph 4 as applied at the site, and, for treatment levels, the treatment methods necessary to achieve these levels;

(d) The short-term risks presented by the onsite treatment method necessary to achieve the levels or treatment methods in paragraph 4;

(e) The long-term protection offered by the engineering design of the corrective action management unit and related engineering controls:

[1] Where the treatment standards in paragraph 4 are substantially met and the principal hazardous constituents in the waste or residuals are of very low mobility;

[2] Where cost-effective treatment has been used and the corrective action management unit meets the article 33.1-24 liner and leachate collection requirements for new land disposal units at subsection 3 or 4 of section 33.1-24-05-177;

[3] Where, after review of appropriate treatment technologies, the department determines that cost-effective treatment is not reasonably available, and the corrective action management unit meets the article 33.1-24 liner and leachate collection requirements for new land disposal units at subsection 3 and 4 of section 33.1-24-05-177;

[4] Where cost-effective treatment has been used and the principal hazardous constituents in the treated wastes are of very low mobility; or

[5] Where, after review of appropriate treatment technologies, the department determines that cost-effective treatment is not reasonably available, the principal hazardous constituents in the wastes are of very low mobility, and either the corrective action management unit meets or exceeds the liner standards for new, replacement, or laterally expanded corrective action management units in paragraphs 1 and 2 of subdivision c, or the corrective action management unit provides substantially equivalent or greater protection.

- (6) The treatment required by the treatment standards must be completed prior to, or within a reasonable time after, placement in the corrective action management unit.
- (7) For the purpose of determining whether wastes placed in corrective action management units have met site-specific treatment standards, the department may, as appropriate, specify a subset of the principal hazardous constituents in the waste as analytical surrogates for determining whether treatment standards have been met for other principal hazardous constituents. This specification will be based on the degree of difficulty of treatment and analysis of constituents with similar treatment properties.
- e. Except as provided in subsection 6, requirements for ground water monitoring and corrective action that are sufficient to:
- (1) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the corrective action management unit;
- (2) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the corrective action management unit in which wastes will remain in place after closure of the corrective action management unit; and
- (3) Require notification to the department and corrective action as necessary to protect human health and the environment for releases to ground water from the corrective action management unit.
- f. Except as provided in subsection 6, closure and postclosure requirements:
- (1) Closure of corrective action management units shall:
- (a) Minimize the need for further maintenance; and
- (b) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.
- (2) Requirements for closure of corrective action management units shall include the following, as appropriate and as deemed necessary by the department for a given corrective action management unit:
- (a) Requirements for excavation, removal, treatment, or containment of wastes; and
- (b) Requirements for removal and decontamination of equipment, devices, and structures used in corrective action management unit eligible waste management activities within the corrective action management unit.

- (3) In establishing specific closure requirements for corrective action management units under this subsection, the department shall consider the following factors:
- (a) Corrective action management unit characteristics;
 - (b) Volume of wastes which remain in place after closure;
 - (c) Potential for releases from the corrective action management unit;
 - (d) Physical and chemical characteristics of the waste;
 - (e) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and
 - (f) Potential for exposure of humans and environmental receptors if releases were to occur from the corrective action management unit.
- (4) Cap requirements:
- (a) At final closure of the corrective action management unit, for areas in which wastes will remain after closure of the corrective action management unit, with constituent concentrations at or above remedial levels or goals applicable to the site, the owner or operator must cover the corrective action management unit with a final cover designed and constructed to meet the following performance criteria, except as provided in subparagraph b:
 - [1] Provide long-term minimization of migration of liquids through the closed unit;
 - [2] Function with minimum maintenance;
 - [3] Promote drainage and minimize erosion or abrasion of the cover;
 - [4] Accommodate settling and subsidence so that the cover's integrity is maintained; and
 - [5] Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
 - (b) The department may determine that modifications to subparagraph a are needed to facilitate treatment or the performance of the corrective action management unit (for example, to promote biodegradation).
- (5) Postclosure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.
6. Corrective action management units used for storage or treatment, or both, only are corrective action management units in which wastes will not remain after closure. Such

corrective action management units must be designated in accordance with all of the requirements of this section, except as follows:

a. Corrective action management units that are used for storage or treatment, or both, only and that operate in accordance with the time limits established in the staging pile regulations at paragraph 3 of subdivision a of subsection 4, subsection 8 and subsection 9 of section 33.1-24-05-554 are subject to the requirements for staging piles at paragraphs 1 and 2 of subdivision a of subsection 4, subdivision b of subsection 4, subsections 5, 6, 10, and 11 of section 33.1-24-05-554 in lieu of the performance standards and requirements for corrective action management units contained in subsection 3 and subdivisions c through f of subsection 5.

b. Corrective action management units that are used for storage or treatment, or both, only and that do not operate in accordance with the time limits established in the staging pile regulations at paragraph 3 of subdivision a of subsection 4, subsections 8 and 9 of section 33.1-24-05-554:

(1) Must operate in accordance with a time limit, established by the department, that is no longer than necessary to achieve a timely remedy selected for the waste; and

(2) Are subject to the requirements for staging piles at paragraphs 1 and 2 of subdivision a of subsection 4, subdivision b of subsection 4, and subsections 5, 6, 10, and 11 of section 33.1-24-05-554 in lieu of the performance standards and requirements for corrective action management units contained in subsection 3 and subdivisions d through f of subsection 5.

7. Corrective action management units into which wastes are placed where all wastes have constituent levels at or below remedial levels or goals applicable to the site do not have to comply with the requirements for liners at paragraph 1 of subdivision c of subsection 5, caps at paragraph 4 of subdivision f of subsection 5, ground water monitoring requirements at subdivision e of subsection 5 or, for treatment or storage, or both, only corrective action management units, the design standards at subsection 6.

8. The department shall provide public notice and a reasonable opportunity for public comment before designating a corrective action management unit. Such notice shall include the rationale for any proposed adjustments under paragraph 5 of subdivision d of subsection 5 to the treatment standards in paragraph 4 of subdivision d of subsection 5.

9. Notwithstanding any other provision of this section, the department may impose additional requirements as necessary to protect human health and the environment.

10. Incorporation of a corrective action management unit into an existing permit must be approved by the department according to the procedures for department-initiated permit modifications under section 33.1-24-06-12, or according to the permit modification procedures of section 33.1-24-06-14.

11. The designation of a corrective action management unit does not change the department's existing authority to address cleanup levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-553. Temporary units (TU).

1. For temporary tanks and container storage areas used to treat or store hazardous remediation wastes during remedial activities required under section 33.1-24-05-58 or Resource Conservation and Recovery Act section 3008(h), or at a permitted facility that is not subject to section 33.1-24-05-58, the department may designate a unit at the facility, as a temporary unit. A temporary unit must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the temporary unit originated. For temporary units, the department may replace the design, operating, or closure standard applicable to these units under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16, with alternative requirements which protect human health and the environment.
2. Any temporary unit to which alternative requirements are applied in accordance with subsection 1 must be:

 - a. Located within the facility boundary; and
 - b. Used only for treatment or storage of remediation wastes.
3. In establishing standards to be applied to a temporary unit, the department shall consider the following factors:

 - a. Length of time such unit will be in operation;
 - b. Type of unit;
 - c. Volumes of wastes to be managed;
 - d. Physical and chemical characteristics of the wastes to be managed in the unit;
 - e. Potential for releases from the unit;
 - f. Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and
 - g. Potential for exposure of humans and environmental receptors if releases were to occur from the unit.
4. The department shall specify in the permit or order the length of time a temporary unit will be allowed to operate, to be no longer than a period of one year. The department shall also specify the design, operating, and closure requirements for the unit.
5. The department may extend the operational period of a temporary unit once for no longer than a period of one year beyond that originally specified in the permit or order, if the department determines that:

 - a. Continued operation of the unit will not pose a threat to human health and the environment; and

- b. Continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.
- 6. Incorporation of a temporary unit or a time extension for a temporary unit into an existing permit must be:
 - a. Approved in accordance with the procedures for department-initiated permit modifications under section 33.1-24-06-12; or
 - b. Requested by the owner or operator as a class II modification according to the procedures under section 33.1-24-06-14.
- 7. The department shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-554. Staging piles.

- 1. A staging pile is an accumulation of solid, nonflowing remediation waste (as defined in section 33.1-24-01-04) that is not a containment building and is used only during remedial operations for temporary storage at a facility. A staging pile must be located within the contiguous property under the control of the owner or operator where the wastes to be managed in the staging pile originated. Staging piles must be designated by the department according to the requirements in this section.
 - a. For the purposes of this section, storage includes mixing, sizing, blending, or other similar physical operations as long as they are intended to prepare the wastes for subsequent management or treatment.
 - b. [Reserved]
- 2. A staging pile may be used to store hazardous remediation waste (or remediation waste otherwise subject to land disposal restrictions) only if the owner or operator follows the standards and design criteria the department has designated for that staging pile. The department must designate the staging pile in a permit or, at an interim status facility, in a closure plan or order (consistent with the applicable requirements of subsection 5 of section 33.1-24-06-16). The department must establish conditions in the permit, closure plan, or order that comply with subsections 4 through 11.
- 3. An owner or operator that is seeking a staging pile designation must provide the following information:
 - a. Sufficient and accurate information to enable the department to impose standards and design criteria for the staging pile according to subsections 4 through 11;
 - b. Certification by a qualified professional engineer for technical data, such as design drawings and specifications, and engineering studies, unless the department determines, based on information that the owner or operator provided, that this certification is not necessary to ensure that a staging pile will protect human health and the environment; and

- c. Any additional information the department determines is necessary to protect human health and the environment.
- 4. Performance criteria for a staging pile. The department must establish the standards and design criteria for the staging pile in the permit, closure plan, or order.
 - a. The standards and design criteria as established by the department in the permit closure plan or order must comply with the following:
 - (1) The staging pile must facilitate a reliable, effective, and protective remedy;
 - (2) The staging pile must be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment, and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment (for example, through the use of liners, covers, and runoff and run-on controls, as appropriate); and
 - (3) The staging pile may not operate for a period of more than two years, except when the department grants an operating term extension under subsection 9. The owner or operator must measure the two-year limit, or other operating term specified by the department in the permit, closure plan, or order, from the first time remediation waste is placed into a staging pile. The owner or operator must maintain a record of the date when remediation waste is first placed into the staging pile for the life of the permit, closure plan, or order, or for three years, whichever is longer.
 - b. In setting the standards and design criteria, the department must consider the following factors:
 - (1) Length of time the staging pile will be in operation;
 - (2) Volumes of wastes the owner or operator intends to store in the staging pile;
 - (3) Physical and chemical characteristics of the wastes to be stored in the unit;
 - (4) Potential for releases from the unit;
 - (5) Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and
 - (6) Potential for human and environmental exposure to potential releases from the unit.
- 5. Ignitable or reactive remediation waste are prohibited from being placed in a staging pile. The owner or operator must not place ignitable or reactive remediation waste in a staging pile unless:
 - a. The owner or operator has treated, rendered, or mixed the remediation waste before being placed in the staging pile so that:
 - (1) The remediation waste no longer meets the definition of ignitable or reactive under section 33.1-24-02-11 or 33.1-24-02-13; and

- (2) The owner or operator has complied with subsection 2 of section 33.1-24-05-08; or
- b. The owner or operator manages the remediation waste to protect it from exposure to any material or condition that may cause it to ignite or react.
6. Management of incompatible remediation wastes in a staging pile. The owner or operator must comply with the following requirements for incompatible wastes (as defined in section 33.1-24-01-04) in staging piles:
- a. The owner or operator may not place incompatible remediation wastes in the same staging pile unless the owner or operator has complied with subsection 2 of section 33.1-24-05-08;
- b. If remediation waste in a staging pile is incompatible with any waste or material stored nearby in containers, other piles, open tanks, or land disposal units (for example, surface impoundments), the owner or operator must separate the incompatible materials, or protect them from one another by using a dike, berm, wall, or other device; and
- c. The owner or operator must not pile remediation waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to comply with subsection 2 of section 33.1-24-05-08.
7. Land disposal restrictions and minimum technological requirements are not triggered by placing hazardous remediation wastes into a staging pile.
8. Staging pile operation time limits. The department may allow a staging pile to operate for up to two years after hazardous remediation waste is first placed into the pile. The owner or operator may use a staging pile no longer than the length of time designated by the department in the permit, closure plan, or order except as provided in subsection 9.
9. Extension of operation time limits.
- a. The department may grant one operating term extension of up to one hundred eighty days beyond the operating term limit contained in the permit, closure plan, or order (see subsection 12 for modification procedures). To justify to the department the need for an extension, the owner or operator must provide sufficient and accurate information to enable the department to determine that continued operation of the staging pile:
- (1) Will not pose a threat to human health and the environment; and
- (2) Is necessary to ensure timely and efficient implementation of remedial actions at the facility.
- b. The department may, as a condition of the extension, specify further standards and design criteria in the permit, closure plan, or order, as necessary, to ensure protection of human health and the environment.
10. Closure requirements for a staging pile located in a previously contaminated area.

- a. Within one hundred eighty days after the operating term of the staging pile expires, the owner or operator must close a staging pile located in a previously contaminated area of the site by removing or decontaminating all:
 - (1) Remediation waste;
 - (2) Contaminated containment system components; and
 - (3) Structures and equipment contaminated with waste and leachate.
 - b. The owner or operator must also decontaminate contaminated subsoils in a manner and according to a schedule that the department determines will protect human health and the environment.
 - c. The department must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.
11. Closure requirements for a staging pile located in an uncontaminated area.
- a. Within one hundred eighty days after the operating term of the staging pile expires, the owner or operator must close a staging pile located in an uncontaminated area of the site according to subsection 1 of section 33.1-24-05-135 and section 33.1-24-05-60.
 - b. The department must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.
12. Modifications to an existing permit, closure plan, or order to allow use of a staging pile.
- a. A permit, other than a remedial action plan, may be modified to incorporate a staging pile or staging pile operating term extension, by either:
 - (1) The department may initiate the modification in accordance with section 33.1-24-06-12; or
 - (2) The owner or operator may request a class 2 modification under section 33.1-24-06-14.
 - b. A remedial action plan may be modified to incorporate a staging pile or staging pile operating term extension when the owner or operator submits a request pursuant to subsections 1 and 2 of section 33.1-24-06-33.
 - c. The owner or operator must follow the applicable requirements under subsection 3 of section 33.1-24-05-61 to modify a closure plan to incorporate a staging pile or staging pile operating term extension.
 - d. To modify an order to incorporate a staging pile or staging pile operating term extension, the owner or operator must follow the terms of the order and the applicable requirements of subsection 5 of section 33.1-24-06-16.
13. The department shall document the rationale for designating a staging pile or staging pile operating term extension and shall make such documentation available to the public.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-555. Disposal of corrective action management unit-eligible wastes in permitted hazardous waste landfills.

1. The department may approve placement of corrective action management unit-eligible wastes in hazardous waste landfills not located at the site from which the waste originated, without the wastes meeting the requirements of sections 33.1-24-05-250 through 33.1-24-05-299, if the conditions in subdivisions a through c are met:
 - a. The waste meets the definition of corrective action management unit-eligible waste in subdivisions a and b of subsection 1 of section 33.1-24-05-552.
 - b. The department identifies principal hazardous constituents in such waste, in accordance with paragraphs 1 and 2 of subdivision d of subsection 5 of section 33.1-24-05-552, and requires that such principal hazardous constituents are treated to any of the following standards specified for corrective action management unit-eligible wastes:
 - (1) The treatment standards under paragraph 4 of subdivision d of subsection 5 of section 33.1-24-05-552; or
 - (2) Treatment standards adjusted in accordance with subparagraphs a, c, d, or item 1 of subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33.1-24-05-552; or
 - (3) Treatment standards adjusted in accordance with item 2 of subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33.1-24-05-552, where treatment has been used and that treatment significantly reduces the toxicity or mobility of the principal hazardous constituents in the waste. For minimizing the short-term and long-term threat posed by the waste, including the threat at the remediation site.
 - c. The landfill receiving the corrective action management unit-eligible waste must have a hazardous waste permit, meet the requirements for new landfills in sections 33.1-24-05-176 through 33.1-24-05-190, and be authorized to accept corrective action management unit-eligible wastes. For the purposes of this requirement, "permit" does not include interim status.
2. The person seeking approval shall provide sufficient information to enable the department with regulatory oversight at the location where the cleanup is taking place to approve placement of corrective action management unit-eligible waste in accordance with subsection 1. Information required by subdivisions a through c of subsection 4 of section 33.1-24-05-552 for corrective action management unit applications must be provided, unless not reasonably available.
3. The department shall provide public notice and a reasonable opportunity for public comment before approving corrective action management unit-eligible waste for placement in an offsite permitted hazardous waste landfill, consistent with the requirements for corrective action management unit approval at subsection 8 of section 33.1-24-05-552. The approval must be specific to a single remediation.

4. Applicable hazardous waste management requirements in sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819, including recordkeeping requirements to demonstrate compliance with treatment standards approved under this section, for corrective action management unit-eligible waste must be incorporated into the receiving facility permit through permit issuance or a permit modification, providing notice and an opportunity for comment and a hearing. Notwithstanding subsection 1 of section 33.1-24-06-10, a landfill may not receive hazardous corrective action management unit-eligible waste under this section unless its permit specifically authorizes receipt of such waste.
5. For each remediation, corrective action management unit-eligible waste may not be placed in an offsite landfill authorized to receive corrective action management unit-eligible waste in accordance with subsection 4 until the following additional conditions have been met:

 - a. The landfill owner or operator notifies the department and other regulatory agency responsible for oversight of the landfill and persons on the facility mailing list, maintained in accordance with paragraph 4 of subdivision a of subsection 3 of section 33.1-24-07-06, of the owner's or operator's intent to receive corrective action management unit-eligible waste in accordance with this section; the notice must identify the source of the remediation waste, the principal hazardous constituents in the waste, and treatment requirements.
 - b. Persons on the facility mailing list may provide comments, including objections to the receipt of the corrective action management unit-eligible waste, to the department within fifteen calendar days of notification.
 - c. The department may object to the placement of the corrective action management unit-eligible waste in the landfill within thirty calendar days of notification; the department may extend the review period an additional thirty calendar days because of public concerns or insufficient information.
 - d. Corrective action management unit-eligible wastes may not be placed in the landfill until the department has notified the facility owner or operator that the department does not object to its placement.
 - e. If the department objects to the placement or does not notify the facility owner or operator that the department has chosen not to object, the facility may not receive the waste, notwithstanding subsection 1 of section 33.1-24-06-10, until the objection has been resolved, or the owner or operator obtains a permit modification in accordance with the procedures of section 33.1-24-06-14 specifically authorizing receipt of the waste.
 - f. As part of the permit issuance or permit modification process of subsection 4, the department may modify, reduce, or eliminate the notification requirements of this subsection as they apply to specific categories of corrective action management unit-eligible waste, based on minimal risk.
6. Generators of corrective action management unit-eligible wastes sent offsite to a hazardous waste landfill under this section must comply with the requirements of subdivision d of subsection 1 of section 33.1-24-05-256; offsite facilities treating

corrective action management unit-eligible wastes to comply with this section must comply with the requirements of subdivision d of subsection 2 of section 33.1-24-05-256, except that the certification must be with respect to the treatment requirements of subdivision b of subsection 1.

7. For the purposes of this section only, the "design of the corrective action management unit" in subparagraph e of paragraph 5 of subdivision d of subsection 5 of section 33.1-24-05-552 means design of the permitted hazardous waste landfill.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-556. [Reserved]

33.1-24-05-557. [Reserved]

33.1-24-05-558. [Reserved]

33.1-24-05-559. [Reserved]

33.1-24-05-560. [Reserved]

33.1-24-05-561. [Reserved]

33.1-24-05-562. [Reserved]

33.1-24-05-563. [Reserved]

33.1-24-05-564. [Reserved]

33.1-24-05-565. [Reserved]

33.1-24-05-566. [Reserved]

33.1-24-05-567. [Reserved]

33.1-24-05-568. [Reserved]

33.1-24-05-569. [Reserved]

33.1-24-05-570. [Reserved]

33.1-24-05-571. [Reserved]

33.1-24-05-572. [Reserved]

33.1-24-05-573. [Reserved]

33.1-24-05-574. [Reserved]

33.1-24-05-575. [Reserved]

33.1-24-05-576. [Reserved]

33.1-24-05-577. [Reserved]

33.1-24-05-578. [Reserved]

33.1-24-05-579. [Reserved]

33.1-24-05-580. [Reserved]

33.1-24-05-581. [Reserved]

33.1-24-05-582. [Reserved]

33.1-24-05-583. [Reserved]

33.1-24-05-584. [Reserved]

33.1-24-05-585. [Reserved]

33.1-24-05-586. [Reserved]

33.1-24-05-587. [Reserved]

33.1-24-05-588. [Reserved]

33.1-24-05-589. [Reserved]

33.1-24-05-590. [Reserved]

33.1-24-05-591. [Reserved]

33.1-24-05-592. [Reserved]

33.1-24-05-593. [Reserved]

33.1-24-05-594. [Reserved]

33.1-24-05-595. [Reserved]

33.1-24-05-596. [Reserved]

33.1-24-05-597. [Reserved]

33.1-24-05-598. [Reserved]

33.1-24-05-599. [Reserved]

33.1-24-05-600. Definitions for the management of used oil.

Terms that are defined in sections 33.1-24-01-04, 33.1-24-02-01, and chapter 33.1-24-08 have the same meanings when used in sections 33.1-24-05-600 through 33.1-24-05-689.

1. "Aboveground tank" means a tank used to store or process used oil that is not an underground storage tank as defined in chapter 33.1-24-08.
2. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

3. "Do-it-yourselfer used oil collection center" means any site or facility that accepts or aggregates and stores used oil collected only from household do-it-yourselfers.
4. "Existing tank" means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or prior to the effective date of the authorized used oil program for the state in which the tank is located. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either:
 - a. A continuous onsite installation program has begun; or
 - b. The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for installation of the tank to be completed within a reasonable time.
5. "Household do-it-yourselfer used oil" means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.
6. "Household do-it-yourselfer used oil generator" means an individual who generates household do-it-yourselfer used oil.
7. "New tank" means a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program for the state in which the tank is located.
8. "Petroleum refining facility" means an establishment primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes, for example, facilities classified as standard industrial code 2911.
9. "Processing" means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation, and re-refining.
10. "Re-refining distillation bottoms" means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.
11. "Tank" means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of nonearthen materials, (for example, wood, concrete, steel, plastic) which provides structural support.
12. "Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is contaminated by physical or chemical impurities.
13. "Used oil aggregation point" means any site or facility that accepts, aggregates, or stores, or any combination, used oil collected only from other used oil generation sites

owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than fifty-five gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

14. "Used oil burner" means a facility where used oil not meeting the specification requirements in section 33.1-24-05-611 is burned for energy recovery in devices identified in subsection 1 of section 33.1-24-05-661.
15. "Used oil collection center" means any site or facility that is registered, licensed and permitted, and recognized by a state, county, or municipal government to manage used oil and accepts, aggregates, and stores used oil collected from used oil generators regulated under sections 33.1-24-05-620 through 33.1-24-05-629 who bring used oil to the collection center in shipments of no more than fifty-five gallons [208.20 liters] under the provisions of section 33.1-24-05-624. Used oil collection centers may also accept used oil from household do-it-yourselfers.
16. "Used oil fuel marketer" means any person who conducts either of the following activities:
 - a. Directs a shipment of off-specification used oil from their facility to a used oil burner;
or
 - b. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611.
17. "Used oil generator" means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.
18. "Used oil processor" means a facility that processes used oil and includes used oil re-refiners.
19. "Used oil transfer facility" means any transportation-related facility including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than twenty-four hours and not longer than thirty-five days during the normal course of transportation or prior to an activity performed pursuant to subdivision b of subsection 2 of section 33.1-24-05-620. Transfer facilities that store used oil for more than thirty-five days are subject to regulation under sections 33.1-24-05-650 through 33.1-24-05-659.
20. "Used oil transporter" means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (for example, settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-601. [Reserved]

33.1-24-05-602. [Reserved]

33.1-24-05-603. [Reserved]

33.1-24-05-604. [Reserved]

33.1-24-05-605. [Reserved]

33.1-24-05-606. [Reserved]

33.1-24-05-607. [Reserved]

33.1-24-05-608. [Reserved]

33.1-24-05-609. [Reserved]

33.1-24-05-610. Applicability of used oil standards.

This section identifies those materials that are subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689. This section also identifies some materials that are not subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689, and indicates whether these materials may be subject to regulation as hazardous waste under article 33.1-24.

1. **Used oil.** The department presumes that used oil is to be recycled unless a used oil handler disposes of used oil or sends used oil for disposal. Except as provided in section 33.1-24-05-611, the regulations of sections 33.1-24-05-600 through 33.1-24-05-689 apply to used oil, and to materials identified in this section as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14.

2. **Mixtures of used oil and hazardous waste.**

a. **Listed hazardous waste.**

(1) Mixtures of used oil and hazardous waste that is listed in sections 33.1-24-02-15 through 33.1-24-02-19 are subject to regulation as hazardous waste under chapters 33.1-24-01 through 33.1-24-04, chapters 33.1-24-06 and 33.1-24-07, and sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-929, rather than as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

(2) Rebuttable presumption for used oil. Used oil containing greater than or equal to one thousand parts per million total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33.1-24-02).

(a) The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33.1-24-05-624, to

reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.

(b) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

b. Characteristic hazardous waste. Mixtures of used oil and hazardous waste that solely exhibit one or more of the hazardous waste characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14 and mixtures of used oil and hazardous waste that is listed in sections 33.1-24-02-15 through 33.1-24-02-19 solely because it exhibits one or more of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14 are subject to:

(1) Except as provided in paragraph 3, regulation as hazardous waste under chapters 33.1-24-01 through 33.1-24-04, chapters 33.1-24-06 and 33.1-24-07, and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929, rather than as used oil under sections 33.1-24-05-600 through 33.1-24-05-689, if the resultant mixture exhibits any characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14; or

(2) Except as specified in paragraph 3, regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under sections 33.1-24-02-10 through 33.1-24-02-14.

(3) Regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689, if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability, for example, ignitable-only mineral spirits, provided that the resultant mixture does not exhibit the characteristic of ignitability under section 33.1-24-02-11.

c. Conditionally exempt small quantity generator hazardous waste. Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under section 33.1-24-02-05 are subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

3. Materials containing or otherwise contaminated with used oil.

a. Except as provided in subdivision b, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

(1) Are not used oil and thus not subject to sections 33.1-24-05-600 through 33.1-24-05-689, and

(2) If applicable are subject to the hazardous waste regulations of chapters 33.1-24-01 through 33.1-24-04, chapters 33.1-24-06 and 33.1-24-07, and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929.

b. Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

c. Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

4. Mixtures of used oil with products.

a. Except as provided in subdivision b, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

b. Mixtures of used oil and diesel fuel mixed onsite by the generator of the used oil for use in the generator's own vehicles are not subject to sections 33.1-24-05-600 through 33.1-24-05-689 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of sections 33.1-24-05-620 through 33.1-24-05-629.

5. Materials derived from used oil.

a. Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal (for example, re-refined lubricants) are:

(1) Not used oil and thus are not subject to sections 33.1-24-05-600 through 33.1-24-05-689; and

(2) Not solid wastes and are thus not subject to the hazardous waste regulations of chapters 33.1-24-01 through 33.1-24-04, chapters 33.1-24-06 and 33.1-24-07, and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929 as provided in paragraph a of subdivision b of subsection 3 of section 33.1-24-02-03.

b. Materials produced from used oil that are burned for energy recovery (for example, used oil fuels) are subject to regulation as used oil under sections 33.1-24-05-600 through 33.1-24-05-689.

c. Except as provided in subdivision d, materials derived from used oil that are disposed of or used in a manner constituting disposal are:

(1) Not used oil and thus are not subject to sections 33.1-24-05-600 through 33.1-24-05-689; and

(2) Are solid wastes and thus are subject to the hazardous waste regulations of chapters 33.1-24-01 through 33.1-24-04, chapters 33.1-24-06 and 33.1-24-07, and sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-

05-800 through 33.1-24-05-929 if the materials are listed or identified as hazardous wastes.

d. Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to sections 33.1-24-05-600 through 33.1-24-05-689.

6. **Wastewater.** Wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689. For purposes of this subsection, de minimis quantities of used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, or to used oil recovered from wastewaters.

7. **Used oil introduced into crude oil pipelines or a petroleum refining facility.**

a. Used oil mixed with crude oil or natural gas liquids (for example, in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689. The used oil is subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689 prior to the mixing of used oil with crude oil or natural gas liquids.

b. Mixtures of used oil and crude oil or natural gas liquids containing less than one percent used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion in the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.

c. Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689 provided that the used oil constitutes less than one percent of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion in the petroleum refining facility process, the used oil is subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.

d. Except as provided in subdivision e, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689 only if the used oil meets the specification of section 33.1-24-05-611. Prior to insertion in the petroleum refining facility process, the used oil is subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.

e. Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689. This

exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (for example, by pouring collected used oil into the wastewater treatment system).

f. Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.

8. **Used oil on vessels.** Used oil produced on vessels from normal shipboard operations is not subject to sections 33.1-24-05-600 through 33.1-24-05-689 until it is transported ashore.

9. **Used oil containing polychlorinated biphenyls.** Used oil containing polychlorinated biphenyls (as defined at 40 CFR 761.3) at any concentration less than fifty parts per million is subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689 unless, because of dilution, it is regulated under 40 CFR part 761 as a used oil containing polychlorinated biphenyls at fifty parts per million or greater. Polychlorinated biphenyl-containing used oil subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689 may also be subject to the prohibitions and requirements found at 40 CFR part 761, including section 761.20(d) and (e). Used oil containing polychlorinated biphenyls at concentrations of fifty parts per million or greater is not subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689, but is subject to regulations under 40 CFR part 761. No person may avoid these provisions by diluting used oil containing polychlorinated biphenyls, unless otherwise specifically provided for in sections 33.1-24-05-600 through 33.1-24-05-689 or 40 CFR part 761.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-611. Used oil specifications.

Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under sections 33.1-24-05-600 through 33.1-24-05-689 unless it is shown not to exceed any of the allowable levels of the constituents and properties shown in table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any allowable level and the person making that showing complies with sections 33.1-24-05-672, 33.1-24-05-673, and subsection 2 of section 33.1-24-05-674, the used oil is no longer subject to sections 33.1-24-05-600 through 33.1-24-05-689.

Table 1. Used Oil Not Exceeding Any Allowable Level Shown Below Is Not Subject to Sections 33.1-24-05-600 Through 33.1-24-05-689 When Burned for Energy Recovery¹

<u>Constituent/Property</u>	<u>Allowable Level</u>
<u>Arsenic</u>	<u>5 ppm maximum.</u>
<u>Cadmium</u>	<u>2 ppm maximum.</u>
<u>Chromium</u>	<u>10 ppm maximum.</u>
<u>Lead</u>	<u>100 ppm maximum.</u>
<u>Flash Point</u>	<u>100 °F minimum.</u>
<u>Total Halogens</u>	<u>4,000 ppm maximum.²</u>

Note: Applicable standards for the burning of used oil containing polychlorinated biphenyls are imposed by 40 CFR 761.20(e).

FOOTNOTE: ¹The allowable levels do not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see subsection 2 of section 33.1-24-05-610).

FOOTNOTE: ²Used oil containing greater than or equal to one thousand parts per million total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under subdivision a of subsection 2 of section 33.1-24-05-610. Such used oil is subject to sections 33.1-24-05-525 through 33.1-24-05-549 rather than sections 33.1-24-05-600 through 33.1-24-05-689 when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-612. Prohibitions.

1. **Surface impoundment prohibition.** Used oil shall not be managed in surface impoundments or waste piles unless the units are subject to regulation under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16.

2. **Use as a dust suppressant.** The use of used oil as a dust suppressant is prohibited.

3. **Burning in particular units.** Off-specification used oil fuel may be burned for energy recovery in only the following devices:

a. Industrial furnaces identified in section 33.1-24-01-04;

b. Boilers, as defined in section 33.1-24-01-04, that are identified as follows:

(1) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(2) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or

(3) Used oil-fired space heaters provided that the burner meets the provisions of section 33.1-24-05-623.

c. Hazardous waste incinerators subject to regulation under sections 33.1-24-05-144 through 33.1-24-05-159 or the applicable requirements of subsection 5 of section 33.1-24-06-16.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-613. [Reserved]

33.1-24-05-614. [Reserved]

33.1-24-05-615. [Reserved]

33.1-24-05-616. [Reserved]

33.1-24-05-617. [Reserved]

33.1-24-05-618. [Reserved]

33.1-24-05-619. [Reserved]

33.1-24-05-620. Applicability of standards for used oil generators.

1. **General.** Except as provided in subdivisions a through d, sections 33.1-24-05-620 through 33.1-24-05-629 applies to all used oil generators. A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

a. Household do-it-yourselfer used oil generators. Household do-it-yourselfer used oil generators are not subject to regulation under sections 33.1-24-05-620 through 33.1-24-05-629.

b. Vessels. Vessels at sea or at port are not subject to sections 33.1-24-05-620 through 33.1-24-05-629. For purposes of sections 33.1-24-05-620 through 33.1-24-05-629, used oil produced on vessels from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the persons removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with sections 33.1-24-05-620 through 33.1-24-05-629 once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of sections 33.1-24-05-620 through 33.1-24-05-629.

c. Diesel fuel. Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to sections 33.1-24-05-660 through 33.1-24-05-689 once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of sections 33.1-24-05-620 through 33.1-24-05-629.

d. Farmers. Farmers who generate an average of twenty-five gallons [94.64 liters] per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.

2. **Other applicable provisions.** Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of sections 33.1-24-05-600 through 33.1-24-05-689 as indicated in subdivisions a through e:

a. Generators who transport used oil, except under the self-transport provisions of subsections 1 and 2 of section 33.1-24-05-624, must also comply with sections 33.1-24-05-640 through 33.1-24-05-649.

b. Generators who process used oil must also comply with sections 33.1-24-05-650 through 33.1-24-05-659.

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- (1) Except as provided in paragraph 2, generators who process or re-refine used oil must also comply with sections 33.1-24-05-650 through 33.1-24-05-659.
-
- (2) Generators who perform the following activities are not processors provided that the used oil is generated onsite and is not being sent offsite to a burner of on-specification or off-specification used oil fuel.
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- (a) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;
-
- (b) Separating used oil from wastewater generated onsite to make the wastewater acceptable for discharge or reuse pursuant to section 402 or section 307(b) of the Clean Water Act or other applicable federal or state regulations governing the management of discharge of wastewaters;
-
- (c) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;
-
- (d) Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible pursuant to subsection 3 of section 33.1-24-05-610; or
-
- (e) Filtering, cleaning, or otherwise reconditioning used oil before burning it in a space heater pursuant to section 33.1-24-05-623.
-
- c. Generators who burn off-specification used oil for energy recovery, except under the onsite space heater provisions of section 33.1-24-05-623, must also comply with sections 33.1-24-05-660 through 33.1-24-05-669.
-
- d. Generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611 must also comply with sections 33.1-24-05-670 through 33.1-24-05-679.
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- e. Generators who dispose of used oil must also comply with sections 33.1-24-05-680 through 33.1-24-05-689.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-621. Hazardous waste mixing.

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1. Mixtures of used oil and hazardous waste must be managed in accordance with subsection 2 of section 33.1-24-05-610.
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2. The rebuttable presumption for used oil of paragraph 2 of subdivision a of subsection 2 of section 33.1-24-05-610 applies to used oil managed by generators. Under the rebuttable presumption for used oil of paragraph 2 of subdivision a of subsection 2 of section 33.1-24-05-610, used oil containing greater than or equal to one thousand parts per million total halogens is presumed to be a hazardous waste and thus must be managed as hazardous waste and not as used oil unless the presumption is rebutted.

However, the rebuttable presumption does not apply to certain metalworking oils or fluids and certain used oils removed from refrigeration units.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-622. Used oil storage.

Used oil generators are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33.1-24-05-620 through 33.1-24-05-629. Used oil generators are also subject to the underground storage tank (chapter 33.1-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33.1-24-05-620 through 33.1-24-05-629.

1. **Storage units.** Used oil generators shall not store used oil in units other than tanks, containers, or units subject to regulation under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16.

2. **Condition of units.** Containers and aboveground tanks used to store used oil at generator facilities must be:

a. In good condition (no severe rusting, apparent structural defects, or deterioration); and

b. Not leaking (no visible leaks).

3. **Labels.**

a. Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil".

b. Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil".

4. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33.1-24-08, sections 33.1-24-08-50 through 33.1-24-08-59, a generator must perform the following cleanup steps:

a. Stop the release;

b. Contain the released used oil;

c. Clean up and manage properly the released used oil and other materials; and

d. If necessary to prevent future releases, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-623. Onsite burning in space heaters.

Generators may burn used oil in used oil-fired space heaters provided that:

1. The heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourselfer used oil generators;
2. The heater is designed to have a maximum capacity of not more than 0.5 million British thermal units per hour; and
3. The combustion gases from the heater are vented to the ambient air.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-624. Offsite shipments.

Except as provided in subsections 1 through 3, generators must ensure that their used oil is transported only by transporters who have obtained identification numbers.

1. **Self-transportation of small amounts to approved collection centers.** Generators may transport, without an identification number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:
 - a. The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
 - b. The generator transports no more than fifty-five gallons [208.20 liters] of used oil at any time; and
 - c. The generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state, county, and municipal government to manage used oil.
2. **Self-transportation of small amounts to aggregation points owned by the generator.** Generators may transport, without an identification number, used oil that is generated at the generator's site to an aggregation point provided that:
 - a. The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
 - b. The generator transports no more than fifty-five gallons [208.20 liters] of used oil at any time; and
 - c. The generator transports the used oil to an aggregation point that is owned or operated by the same generator.
3. **Tolling arrangements.** Used oil generators may arrange for used oil to be transported by a transporter without an identification number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:

- a. The type of used oil and the frequency of shipments;
- b. That the vehicle used to transport the used oil to the processing facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor; and
- c. That reclaimed oil will be returned to the generator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-625. [Reserved]

33.1-24-05-626. [Reserved]

33.1-24-05-627. [Reserved]

33.1-24-05-628. [Reserved]

33.1-24-05-629. [Reserved]

33.1-24-05-630. Do-it-yourselfer used oil collection centers.

1. **Applicability.** This section applies to owners or operators of all do-it-yourselfer used oil collection centers. A do-it-yourselfer used oil collection center is any site or facility that accepts, aggregates, and stores used oil collected only from household do-it-yourselfers.
2. **Do-it-yourselfer used oil collection center requirements.** Owners or operators of all do-it-yourselfer used oil collection centers must comply with the generator standards in sections 33.1-24-05-620 through 33.1-24-05-629.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-631. Used oil collection centers.

1. **Applicability.** This section applies to owners or operators of used oil collection centers. A used oil collection center is any site or facility that accepts, aggregates, and stores used oil collected from used oil generators regulated under sections 33.1-24-05-620 through 33.1-24-05-629 who bring used oil to the collection center in shipments of no more than fifty-five gallons [208.20 liters] under the provisions of subsection 1 of section 33.1-24-05-624. Used oil collection centers may also accept used oil from household do-it-yourselfers.
2. **Used oil collection center requirements.** Owners or operators of all used oil collection centers must:
 - a. Comply with the generator standards in sections 33.1-24-05-620 through 33.1-24-05-629; and
 - b. Be registered, licensed, permitted, and recognized by a state, county, and municipal government to manage used oil.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-632. Used oil aggregation points owned by the generator.

1. **Applicability.** This section applies to owners or operators of all used oil aggregation points. A used oil aggregation point is any site or facility that accepts, aggregates, or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than fifty-five gallons [208.20 liters] under the provisions of subsection 2 of section 33.1-24-05-624. Used oil aggregation points may also accept used oil from household do-it-yourselfers.
2. **Used oil aggregation point requirements.** Owners or operators of all used oil aggregation points must comply with the generator standards in sections 33.1-24-05-620 through 33.1-24-05-629.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-633. [Reserved]

33.1-24-05-634. [Reserved]

33.1-24-05-635. [Reserved]

33.1-24-05-636. [Reserved]

33.1-24-05-637. [Reserved]

33.1-24-05-638. [Reserved]

33.1-24-05-639. [Reserved]

33.1-24-05-640. Applicability of standards for used oil transporters and transfer facilities.

1. **General.** Except as provided in subdivisions a through d, sections 33.1-24-05-640 through 33.1-24-05-649 apply to all used oil transporters. Used oil transporters are persons who transport used oil, persons who collect used oil from more than one generator and transport the collected oil, and owners and operators of used oil transfer facilities.
 - a. Sections 33.1-24-05-640 through 33.1-24-05-649 do not apply to onsite transportation.
 - b. Sections 33.1-24-05-640 through 33.1-24-05-649 do not apply to generators who transport shipments of used oil totaling fifty-five gallons [208.20 liters] or less from the generator to a used oil collection center as specified in subsection 1 of section 33.1-24-05-624.

- c. Sections 33.1-24-05-640 through 33.1-24-05-649 do not apply to generators who transport shipments of used oil totaling fifty-five gallons [208.20 liters] or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in subsection 2 of section 33.1-24-05-624.
 - d. Sections 33.1-24-05-640 through 33.1-24-05-649 do not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor, or burner subject to the requirements of sections 33.1-24-05-600 through 33.1-24-05-689. Except as provided in subdivisions a through c, sections 33.1-24-05-640 through 33.1-24-05-649 do, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.
- 2. Imports and exports.** Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of sections 33.1-24-05-640 through 33.1-24-05-649 from the time the used oil enters and until the time it exits the United States.
- 3. Trucks used to transport hazardous waste.** Unless trucks previously used to transport hazardous waste are emptied as described in section 33.1-24-02-07 prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of subsection 2 of section 33.1-24-05-610, the hazardous waste and used oil mixture is determined not to be hazardous waste.
- 4. Other applicable provisions.** Used oil transporters who conduct the following activities are also subject to other applicable provisions of sections 33.1-24-05-600 through 33.1-24-05-689 as indicated in subdivisions a through e:
- a. Transporters who generate used oil must also comply with sections 33.1-24-05-620 through 33.1-24-05-629;
 - b. Transporters who process used oil, except as provided in section 33.1-24-05-641, must also comply with sections 33.1-24-05-650 through 33.1-24-05-659;
 - c. Transporters who burn off-specification used oil for energy recovery must also comply with sections 33.1-24-05-660 through 33.1-24-05-669;
 - d. Transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611 must also comply with sections 33.1-24-05-670 through 33.1-24-05-679; and
 - e. Transporters who dispose of used oil must also comply with sections 33.1-24-05-680 through 33.1-24-05-689.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-641. Restrictions on transporters who are not also processors.

1. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, except as provided in subsection 2, used oil transporters may not process used oil unless they also comply with the requirements for processors in sections 33.1-24-05-650 through 33.1-24-05-659.
2. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products unless they also comply with the processor requirements in sections 33.1-24-05-650 through 33.1-24-05-659.
3. Transporters of used oil that is removed from oil bearing electrical transformers and turbines and filtered by the transporter or at a transfer facility prior to being returned to its original use are not subject to the processor requirements of sections 33.1-24-05-650 through 33.1-24-05-659.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-642. Notification.

1. **Identification numbers.** Used oil transporters who have not previously complied with the notification requirements of section 33.1-24-03-03 must comply with these requirements and obtain an identification number.
2. **Mechanics of notification.** A used oil transporter who has not received an identification number may obtain one by notifying the department of their used oil activity by submitting either:
 - a. A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
 - b. A letter requesting an identification number.

The letter should include the following information:

- (1) Transporter company name;
- (2) Owner of the transporter company;
- (3) Mailing address for the transporter;
- (4) Name and telephone number for the transporter point of contact;
- (5) Type of transport activity (for example, transport only, transport and transfer facility, transfer facility only);
- (6) Location of all transfer facilities at which used oil is stored; and
- (7) Name and telephone number for a contact at each transfer facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-643. Used oil transportation.

1. **Deliveries.** A used oil transporter shall deliver all used oil received to:

- a. Another used oil transporter, provided that the transporter has obtained an identification number;
- b. A used oil processing facility who has obtained an identification number;
- c. An off-specification used oil burner facility who has obtained an identification number; or
- d. An on-specification used oil burner facility.

2. **Department of transportation requirements.** Used oil transporters shall comply with all applicable requirements under the United States department of transportation regulations in 49 CFR parts 171 through 180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 shall comply with all applicable regulations in 49 CFR parts 171 through 180.

3. **Used oil discharges.**

- a. In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (for example, notify local authorities, dike the discharge area).
- b. If a discharge of used oil occurs during transportation and an official (state or local government or a federal agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have identification numbers.
- c. An air, rail, highway, or water transporter who has discharged used oil must:
 - (1) Give notice, if required by 49 CFR 171.15 to the national response center (800-424-8802 or 202-426-2675); and
 - (2) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590.
- d. A water transporter who has discharged used oil shall give notice as required by 33 CFR 153.203.
- e. A transporter shall clean up any used oil discharge that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-644. Rebuttable presumption for used oil.

1. To ensure that used oil is not a hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33.1-24-05-610, the used oil transporter shall determine whether the total halogen content of used oil being transported or stored at a transfer facility is above or below one thousand parts per million.
2. The transporter shall make this determination by:
 - a. Testing the used oil; or
 - b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used.
3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33.1-24-02).
 - a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33.1-24-05-624, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
 - b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons removed from refrigeration units if the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oil contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.
4. Record retention. Records of analyses conducted or information used to comply with subsections 1, 2, and 3 must be maintained by the transporter for at least three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-645. Used oil storage at transfer facilities.

Used oil transporters are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33.1-24-05-640 through 33.1-24-05-649. Used oil transporters are also subject to the underground storage tank (chapter 33.1-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33.1-24-05-640 through 33.1-24-05-649.

1. **Applicability.** This section applies to used oil transfer facilities. Used oil transfer facilities are transportation-related facilities including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than twenty-four hours during the normal course of transportation and not longer than thirty-five days. Transfer facilities that store used oil for more than thirty-five days are subject to regulation under sections 33.1-24-05-650 through 33.1-24-05-659.
2. **Storage units.** Owners or operators of used oil transfer facilities may not store used oil in units other than tanks, containers, or units subject to regulation under sections 33.1-24-05-01 through 33.1-24-05-190, sections 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16.
3. **Condition of units.** Containers and aboveground tanks used to store used oil at transfer facilities must be:
 - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
 - b. Not leaking (no visible leaks).
4. **Secondary containment for containers.** Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or
 - (3) An equivalent secondary containment system.
 - b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
5. **Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
 - (3) An equivalent secondary containment system.
 - b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.

6. **Secondary containment for new aboveground tanks.** New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

a. The secondary containment system must consist of, at a minimum:

(1) Dikes, berms, or retaining walls; and

(2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(3) An equivalent secondary containment system.

b. The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.

7. **Labels.**

a. Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words "Used Oil".

b. Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil".

8. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33.1-24-08, sections 33.1-24-08-50 through 33.1-24-08-59, the owner or operator of a transfer facility must perform the following cleanup steps:

a. Stop the release;

b. Contain the released used oil;

c. Clean up and manage properly the released used oil and other materials; and

d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-646. Tracking.

1. **Acceptance.** Used oil transporters must keep a record of each used oil shipment accepted for transport. Records for each shipment must include:

a. The name and address of the generator, transporter, or processor who provided the used oil for transport;

b. The identification number (if applicable) of the generator, transporter, or processor who provided the used oil for transport;

c. The quantity of used oil accepted;

- d. The date of acceptance; and
 - e. The signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor who provided the used oil for transport.
 - f. Intermediate rail transporters are not required to sign the record of acceptance to comply with subdivision e.
2. **Deliveries.** Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter, or to a used oil burner, processor, or disposal facility. Records of each delivery must include:
- a. The name and address of the receiving facility or transporter;
 - b. The identification number of the receiving facility or transporter;
 - c. The quantity of used oil delivered;
 - d. The date of delivery; and
 - e. The signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.
 - f. Intermediate rail transporters are not required to sign the record of acceptance to comply with subdivision e.
3. **Exports of used oil.** Used oil transporters must maintain the records described in subdivisions a through d of subsection 2 for each shipment of used oil exported to any foreign country.
4. **Record retention.** The records described in subsections 1, 2, and 3 must be maintained for at least three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-647. Management of residues.

Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in subsection 5 of section 33.1-24-05-610.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-648. [Reserved]

33.1-24-05-649. [Reserved]

33.1-24-05-650. Applicability of standards for used oil processors.

- 1. The requirements of sections 33.1-24-05-650 through 33.1-24-05-659 apply to owners and operators of facilities that process used oil. Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for

production of, fuel oils, lubricants, or other used oil-derived products. Processing includes: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation, and re-refining. The requirements of sections 33.1-24-05-650 through 33.1-24-05-659 do not apply to:

a. Transporters who conduct incidental processing operations that occur during the normal course of transportation as provided in section 33.1-24-05-641; or

b. Burners who conduct incidental processing operations that occur during the normal course of used oil management prior to burning as provided in subsection 2 of section 33.1-24-05-661.

2. Other applicable provisions. Used oil processors who conduct the following activities are also subject to the requirements of other applicable provisions of sections 33.1-24-05-600 through 33.1-24-05-689 as indicated in subdivisions a through e.

a. Processors who generate used oil must also comply with sections 33.1-24-05-620 through 33.1-24-05-629;

b. Processors who transport used oil must also comply with sections 33.1-24-05-640 through 33.1-24-05-649;

c. Except as provided in paragraphs 1 and 2, processors who burn off-specification used oil for energy recovery must also comply with sections 33.1-24-05-660 through 33.1-24-05-669. Processors burning used oil for energy recovery under the following conditions are not subject to sections 33.1-24-05-660 through 33.1-24-05-669:

(1) The used oil is burned in an onsite space heater that meets the requirements of section 33.1-24-05-623; or

(2) The used oil is burned for purposes of processing used oil, which is considered burning incidentally to used oil processing;

d. Processors who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611 must also comply with sections 33.1-24-05-670 through 33.1-24-05-679; and

e. Processors who dispose of used oil also must comply with the applicable sections 33.1-24-05-680 through 33.1-24-05-689.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-651. Notification.

1. **Identification numbers.** Used oil processors who have not previously complied with the notification requirements of section 33.1-24-03-03 must comply with these requirements and obtain an identification number.

2. **Mechanics of notification.** A used oil processor who has not received an identification number may obtain one by notifying the department of their used oil activity by submitting either:

- a. A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
- b. A letter requesting an identification number.

The letter should include the following information:

- (1) Processor company name;
- (2) Owner of the processor company;
- (3) Mailing address for the processor;
- (4) Name and telephone number for the processor point of contact;
- (5) Type of used oil activity; and
- (6) Location of the processor facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-652. General facility standards.

1. **Preparedness and prevention.** Owners and operators of used oil processing facilities shall comply with the following requirements:

- a. Maintenance and operation of facility. Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water which could threaten human health or the environment.
- b. Required equipment. All facilities must be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in paragraphs 1 through 4:
 - (1) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
 - (2) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
 - (3) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
 - (4) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

- c. Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.
 - d. Access to communications or alarm system.
 - (1) When used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subdivision b.
 - (2) If there is only one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subdivision b.
 - e. Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.
 - f. Arrangements with local authorities.
 - (1) The owner or operator shall attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:
 - (a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;
 - (b) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;
 - (c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and
 - (d) Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
 - (2) Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.
2. Contingency plan and emergency procedures. Owners and operators of used oil processing facilities must comply with the following requirements:

a. Purpose and implementation of contingency plan.

- (1) Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water.
- (2) The provisions of the plan must be carried out immediately when there is a fire, explosion, or release of used oil which could threaten human health or the environment.

b. Content of contingency plan.

- (1) The contingency plan must describe the actions facility personnel must take to comply with subdivisions a and f in response to fires, explosions, or any unplanned sudden or nonsudden release of used oil to air, soil, or surface water at the facility.
- (2) If the owner or operator has already prepared a spill prevention, control, and countermeasures (SPCC) plan in accordance with 40 CFR part 112, or 40 CFR part 1510 of chapter V, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of sections 33.1-24-05-600 through 33.1-24-05-689.
- (3) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services, pursuant to subdivision f of subsection 1.
- (4) The plan must list names, addresses, and telephone numbers (office and home) of all persons qualified to act as emergency coordinator (see subdivision e), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
- (5) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
- (6) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).

c. Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

- (1) Maintained at the facility; and
- (2) Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.
- d. Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended, if necessary, when:
 - (1) Applicable regulations are revised;
 - (2) The plan fails in an emergency;
 - (3) The facility changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of used oil, or changes the response necessary in an emergency;
 - (4) The list of emergency coordinators changes; or
 - (5) The list of emergency equipment changes.
- e. Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (for example, available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

Guidance: The emergency coordinator's responsibilities are more fully spelled out in subdivision f. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.
- f. Emergency procedures.
 - (1) When there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:
 - (a) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
 - (b) Notify appropriate state or local agencies with designated response roles if their help is needed.
 - (2) When there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analyses.

- (3) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (for example, the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosions).
- (4) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the emergency coordinator must report these findings as follows:
- (a) If the emergency coordinator's assessment indicated that evacuation of local areas may be advisable, the emergency coordinator must immediately notify appropriate local authorities. The emergency coordinator must be available to help appropriate officials decide whether local areas should be evacuated; and
- (b) The emergency coordinator must immediately notify either the government official designated as the onscene coordinator for the geographical area (in the applicable regional contingency plan under part 1510 of 40 CFR), or the national response center (using their twenty-four-hour toll-free number 800-424-8802). The report must include:
- [1] Name and telephone number of reporter;
- [2] Name and address of facility;
- [3] Time and type of incident (for example, release, fire);
- [4] Name and quantity of materials involved, to the extent known;
- [5] The extent of injuries, if any; and
- [6] The possible hazards to human health, or the environment, outside the facility.
- (5) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.
- (6) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
- (7) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or

surface water, or any other material that results from a release, fire, or explosion at the facility.

(8) The emergency coordinator must ensure that, in the affected areas of the facility:

(a) No waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed; and

(b) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(c) The owner or operator must notify the department, and appropriate state and local authorities that the facility is in compliance with subparagraphs a and b before operations are resumed in the affected areas of the facility.

(9) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, the owner or operator must submit a written report on the incident to the department. The report must include:

(a) Name, address, and telephone number of the owner or operator;

(b) Name, address, and telephone number of the facility;

(c) Date, time, and type of incident (for example, fire, explosion);

(d) Name and quantity of materials involved;

(e) The extent of injuries, if any;

(f) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(g) Estimated quantity and disposition of recovered material that resulted from the incident.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-653. Rebuttable presumption for used oil.

1. To ensure that used oil managed at a processing facility is not hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33.1-24-05-610, the owner or operator of a used oil processing facility must determine whether the total halogen content of used oil managed at the facility is above or below one thousand parts per million.

2. The owner or operator must make this determination by:

a. Testing the used oil; or

b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33.1-24-02).

a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.

b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-654. Used oil management.

Used oil processors are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33.1-24-05-650 through 33.1-24-05-659. Used oil processors are also subject to the underground storage tank (chapter 33.1-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of sections 33.1-24-05-650 through 33.1-24-05-659.

1. **Management units.** Used oil processors may not store used oil in units other than tanks, containers, or units subject to regulation under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16.

2. **Condition of units.** Containers and aboveground tanks used to store or process used oil at processing facilities must be:

a. In good condition (no severe rusting, apparent structural defects, or deterioration);
and

b. Not leaking (no visible leaks).

3. **Secondary containment for containers.** Containers used to store or process used oil at processing facilities must be equipped with a secondary containment system.

a. The secondary containment system must consist of, at a minimum:

- (1) Dikes, berms, or retaining walls; and
- (2) A floor. The floor must cover the entire area within the dike, berm, or retaining walls; or
- (3) An equivalent secondary containment system.
- b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
- 4. Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store or process used oil at processing facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
 - (3) An equivalent secondary containment system.
 - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
- 5. Secondary containment for new aboveground tanks.** New aboveground tanks used to store or process used oil at processing facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
 - (3) An equivalent secondary containment system.
 - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
- 6. Labels.**
 - a. Containers and aboveground tanks used to store or process used oil at processing facilities must be labeled or marked clearly with the words "Used Oil".
 - b. Fill pipes used to transfer used oil into underground storage tanks at processing facilities must be labeled or marked clearly with the words "Used Oil".

7. **Response to releases.** Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33.1-24-08, sections 33.1-24-08-50 through 33.1-24-08-59, an owner or operator must perform the following cleanup steps:

a. Stop the release;

b. Contain the released used oil;

c. Clean up and manage properly the released used oil and other materials; and

d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

8. **Closure.**

a. Aboveground tanks. Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:

(1) At closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under article 33.1-24.

(2) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph 1, then the owner or operator must close the tank system and perform postclosure care in accordance with the closure and postclosure care requirements that apply to hazardous waste landfills (section 33.1-24-05-180).

b. Containers. Owners and operators who store used oil in containers must comply with the following requirements:

(1) At closure, containers holding used oils or residues of used oil must be removed from the site; and

(2) The owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under chapter 33.1-24-02.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-655. Analysis plan.

Owners or operators of used oil processing facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of section 33.1-24-05-653 and, if applicable, section 33.1-24-05-672. The owner or operator must keep the plan at the facility.

1. Rebuttable presumption for used oil in section 33.1-24-05-653. At a minimum, the plan must specify the following:

a. Whether sample analyses or knowledge of the halogen content of the used oil will be used to make this determination.

b. If sample analyses are used to make this determination:

(1) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

(a) One of the sampling methods in appendix I of chapter 33.1-24-02; or

(b) A method shown to be equivalent under sections 33.1-24-01-06 and 33.1-24-01-07;

(2) The frequency of sampling to be performed, and whether the analysis will be performed onsite or offsite; and

(3) The methods used to analyze used oil for the parameters specified in section 33.1-24-05-653; and

c. The type of information that will be used to determine the halogen content of the used oil.

2. On-specification used oil fuel in section 33.1-24-05-672. At a minimum, the plan must specify the following if section 33.1-24-05-672 is applicable:

a. Whether sample analyses or other information will be used to make this determination;

b. If sample analyses are used to make this determination:

(1) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

(a) One of the sampling methods in appendix I of chapter 33.1-24-02; or

(b) A method shown to be equivalent under sections 33.1-24-01-06 and 33.1-24-01-07;

(2) Whether used oil will be sampled and analyzed prior to or after any processing;

(3) The frequency of sampling to be performed, and whether the analysis will be performed onsite or offsite; and

(4) The methods used to analyze used oil for the parameters specified in section 33.1-24-05-672; and

c. The type of information that will be used to make the on-specification used oil fuel determination.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-656. Tracking.

1. **Acceptance.** Used oil processors must keep a record of each used oil shipment accepted for processing. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:

a. The name and address of the transporter who delivered the used oil to the processor;

b. The name and address of the generator or processor from whom the used oil was sent for processing;

c. The identification number of the transporter who delivered the used oil to the processor;

d. The identification number (if applicable) of the generator or processor from whom the used oil was sent for processing;

e. The quantity of used oil accepted; and

f. The date of acceptance.

2. **Delivery.** Used oil processor must keep a record of each shipment of used oil that is shipped to a used oil burner, processor, or disposal facility. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:

a. The name and address of the transporter who delivers the used oil to the burner, processor, or disposal facility;

b. The name and address of the burner, processor, or disposal facility that will receive the used oil;

c. The identification number of the transporter who delivers the used oil to the burner, processor, or disposal facility;

d. The identification number of the burner, processor, or disposal facility that will receive the used oil;

e. The quantity of used oil shipped; and

f. The date of shipment.

3. **Record retention.** The records described in subsections 1 and 2 must be maintained for at least three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-657. Operating record and reporting.

1. Operating record.

- a. The owner or operator must keep a written operating record at the facility.
- b. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility;
 - (1) Records and results of used oil analyses performed as described in the analysis plan required under section 33.1-24-05-655; and
 - (2) Summary reports and details of all incidents that require implementation of the contingency plan as specified in subsection 2 of section 33.1-24-05-652.

2. Reporting. A used oil processor must report to the department, in the form of a letter, on a biennial basis (by March first of each even-numbered year), the following information concerning used oil activities during the previous calendar year:

- a. The identification number, name, and address of the processor;
- b. The calendar year covered by the report; and
- c. The quantities of used oil accepted for processing and the manner in which the used oil is processed, including the specific processes employed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-658. Offsite shipments of used oil.

Used oil processors who initiate shipments of used oil offsite must ship the used oil using a used oil transporter who has obtained an identification number.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-659. Management of residues.

Owners and operators who generate residues from the storage or processing of used oil must manage the residues as specified in subsection 5 of section 33.1-24-05-610.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-660. Applicability of standards for used oil burners who burn off-specification used oil for energy recovery.

- 1. **General.** The requirements of sections 33.1-24-05-660 through 33.1-24-05-669 apply to used oil burners except as specified in subdivisions a and b. A used oil burner is a facility where used oil not meeting the specification requirements in section 33.1-24-05-611 is burned for energy recovery in devices identified in subsection 1 of section 33.1-24-

05-661. Facilities burning used oil for energy recovery under the following conditions are not subject to sections 33.1-24-05-660 through 33.1-24-05-669:

- a. The used oil is burned by the generator in an onsite space heater under the provisions of section 33.1-24-05-623; or
- b. The used oil is burned by a processor for purposes of processing used oil, which is considered burning incidentally to used oil processing.

2. **Other applicable provisions.** Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions of sections 33.1-24-05-600 through 33.1-24-05-689 as indicated below.

- a. Burners who generate used oil must also comply with sections 33.1-24-05-620 through 33.1-24-05-629;
- b. Burners who transport used oil must also comply with sections 33.1-24-05-640 through 33.1-24-05-649;
- c. Except as provided in subsection 2 of section 33.1-24-05-661, burners who process or re-refine used oil must also comply with sections 33.1-24-05-650 through 33.1-24-05-659;
- d. Burners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611 must also comply with sections 33.1-24-05-670 through 33.1-24-05-679; and
- e. Burners who dispose of used oil must comply with sections 33.1-24-05-680 through 33.1-24-05-689.

3. **Specification fuel.** Sections 33.1-24-05-660 through 33.1-24-05-669 do not apply to persons burning used oil that meets the used oil fuel specifications of section 33.1-24-05-611, provided that the burner complies with the requirements of sections 33.1-24-05-670 through 33.1-24-05-679.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-661. Restrictions on burning.

1. Off-specification used oil fuel may be burned for energy recovery in only the following devices:

a. Industrial furnaces identified in section 33.1-24-01-04;

b. Boilers, as defined in section 33.1-24-01-04, which are identified as follows:

- (1) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

- (2) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or
- (3) Used oil-fired space heaters provided that the burner meets the provisions of section 33.1-24-05-623; or
- c. Hazardous waste incinerators subject to regulation under sections 33.1-24-05-144 through 33.1-24-05-159.

2. Used oil burners.

- a. With the following exception, used oil burners may not process used oil unless they also comply with the requirements of sections 33.1-24-05-650 through 33.1-24-05-659.
- b. Used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning, but may not aggregate for purposes of producing on-specification used oil.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-662. Notification.

- 1. **Identification numbers.** Used oil burners who have not previously complied with the notification requirements of section 33.1-24-03-03 must comply with these requirements and obtain an identification number.
- 2. **Mechanics of notification.** A used oil burner who has not received an identification number may obtain one by notifying the department of the used oil burner's used oil activity by submitting either:
 - a. A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
 - b. A letter requesting an identification number. The letter should include the following information:
 - (1) Burner company name;
 - (2) Owner of the burner company;
 - (3) Mailing address for the burner;
 - (4) Name and telephone number for the burner point of contact;
 - (5) Type of used oil activity; and
 - (6) Location of the burner facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-663. Rebuttable presumption for used oil.

1. To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of paragraph 2 of subdivision a of subsection 2 of section 33.1-24-05-610, a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below one thousand parts per million.
2. The used oil burner must determine if the used oil contains above or below one thousand parts per million total halogens by:
 - a. Testing the used oil;
 - b. Applying knowledge of the halogen content of the used oil in light of the materials or processes used; or
 - c. If the used oil has been received from a processor subject to regulation under sections 33.1-24-05-650 through 33.1-24-05-659, using information provided by the processor.
3. If the used oil contains greater than or equal to one thousand parts per million total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in sections 33.1-24-02-15 through 33.1-24-02-19. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix V of chapter 33.1-24-02).
 - a. The rebuttable presumption does not apply to metalworking oils or fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in subsection 3 of section 33.1-24-05-624, to reclaim metalworking oils or fluids. The presumption does apply to metalworking oils or fluids if such oils or fluids are recycled in any other manner, or disposed.
 - b. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons removed from refrigeration units where the chlorofluorocarbons are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with chlorofluorocarbons that have been mixed with used oil from sources other than refrigeration units.
4. Record retention. Records of analyses conducted or information used to comply with subsections 1, 2, and 3 must be maintained by the burner for at least three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-664. Used oil storage.

Used oil burners are subject to all applicable spill prevention, control, and countermeasures [40 CFR part 112] in addition to the requirements of sections 33.1-24-05-660 through 33.1-24-05-669. Used oil burners are also subject to the underground storage tank (chapter 33.1-24-08) standards for used oil stored in underground tanks whether or not the used oil exhibits any

characteristics of hazardous waste, in addition to the requirements of sections 33.1-24-05-660 through 33.1-24-05-669.

1. **Storage units.** Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or the applicable requirements of subsection 5 of section 33.1-24-06-16.
2. **Condition of units.** Containers and aboveground tanks used to store oil at burner facilities must be:
 - a. In good condition (no severe rusting, apparent structural defects, or deterioration); and
 - b. Not leaking (no visible leaks).
3. **Secondary containment for containers.** Containers used to store used oil at burner facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall.
 - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
4. **Secondary containment for existing aboveground tanks.** Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and
 - (2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
 - (3) An equivalent secondary containment system.
 - b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.
5. **Secondary containment for new aboveground tanks.** New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.
 - a. The secondary containment system must consist of, at a minimum:
 - (1) Dikes, berms, or retaining walls; and

(2) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(3) An equivalent secondary containment system.

b. The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, ground water, or surface water.

6. Labels.

a. Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil".

b. Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil".

7. Response to releases. Upon detection of a release of used oil to the environment not subject to the requirements of chapter 33.1-24-08, sections 33.1-24-08-50 through 33.1-24-08-59, a burner must perform the following cleanup steps:

a. Stop the release;

b. Contain the released used oil;

c. Clean up and manage properly the released used oil and other materials; and

d. If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-665. Tracking.

1. Acceptance. Used oil burners must keep a record of each used oil shipment accepted for burning. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:

a. The name and address of the transporter who delivered the used oil to the burner;

b. The name and address of the generator or processor from whom the used oil was sent to the burner;

c. The identification number of the transporter who delivered the used oil to the burner;

d. The identification number (if applicable) of the generator or processor from whom the used oil was sent to the burner;

e. The quantity of used oil accepted; and

f. The date of acceptance.

2. **Record retention.** The records described in subsection 1 must be maintained for at least three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-666. Notices.

1. **Certification.** Before a burner accepts the first shipment of off-specification used oil fuel from a generator, transporter, or processor, the burner must provide to the generator, transporter, or processor a one-time written and signed notice certifying that:

- a. The burner has notified the department stating the location and general description of the burner's used oil management activities; and
- b. The burner will burn the used oil only in an industrial furnace or boiler identified in subsection 1 of section 33.1-24-05-661.

2. **Certification retention.** The certification described in subsection 1 must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-667. Management of residues.

Burners who generate residues from the storage or burning of used oil must manage the residues as specified in subsection 5 of section 33.1-24-05-610.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-668. [Reserved]

33.1-24-05-669. [Reserved]

33.1-24-05-670. Applicability of standards for used oil fuel marketers.

1. Any person who conducts either of the following activities is subject to the requirements of sections 33.1-24-05-670 through 33.1-24-05-679:

- a. Directs a shipment of off-specification used oil from their facility to a used oil burner;
or
- b. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in section 33.1-24-05-611.

2. The following persons are not marketers subject to sections 33.1-24-05-670 through 33.1-24-05-679:

- a. Used oil generators and transporters who transport used oil received only from generators, unless the generator or transporter directs a shipment of off-specification used oil from their facility to a used oil burner. However, processors who burn some used oil fuel for purposes of processing are considered to be burning incidentally to processing. Thus, generators and transporters who direct shipments of off-specification used oil to processors who incidentally burn used oil are not marketers subject to sections 33.1-24-05-670 through 33.1-24-05-679;
 - b. Persons who direct shipments of on-specification used oil and who are not the first person to claim the oil meets the used oil fuel specifications of section 33.1-24-05-611.
3. Any person subject to the requirements of sections 33.1-24-05-670 through 33.1-24-05-679 must also comply with one of the following:
- a. Sections 33.1-24-05-620 through 33.1-24-05-629 - standards for used oil generators;
 - b. Sections 33.1-24-05-640 through 33.1-24-05-649 - standards for used oil transporters and transfer facilities;
 - c. Sections 33.1-24-05-650 through 33.1-24-05-659 - standards for used oil processors; or
 - d. Sections 33.1-24-05-660 through 33.1-24-05-669 - standards for used oil burners who burn off-specification used oil for energy recovery.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-671. Prohibitions.

A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:

- 1. Has an identification number; and
- 2. Burns the used oil in an industrial furnace or boiler identified in subsection 1 of section 33.1-24-05-661.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-672. On-specification used oil fuel.

- 1. **Analysis of used oil fuel.** A generator, transporter, processor, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of section 33.1-24-05-611 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
- 2. **Record retention.** A generator, transporter, processor, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil

fuel under section 33.1-24-05-611, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-673. Notification.

1. Identification numbers. A used oil fuel marketer subject to the requirements of sections 33.1-24-05-670 through 33.1-24-05-679 who has not previously complied with the notification requirements of section 33.1-24-03-03 must comply with these requirements and obtain an identification number.
2. A marketer who has not received an identification number may obtain one by notifying the department of their used oil activity by submitting either:
 - a. A completed notification of regulated waste activity form (environmental protection agency form 8700-12, or equivalent state form); or
 - b. A letter requesting an identification number. The letter should include the following information:
 - (1) Marketer company name;
 - (2) Owner of the marketer;
 - (3) Mailing address for the marketer;
 - (4) Name and telephone number for the marketer point of contact; and
 - (5) Type of used oil activity (for example, generator directing shipments of off-specification used oil to a burner).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-674. Tracking.

1. **Off-specification used oil delivery.** Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:
 - a. The name and address of the transporter who delivers the used oil to the burner;
 - b. The name and address of the burner who will receive the used oil;
 - c. The identification number of the transporter who delivers the used oil to the burner;
 - d. The identification number of the burner;
 - e. The quantity of used oil shipped; and

f. The date of shipment.

2. **On-specification used oil delivery.** A generator, transporter, processor, or burner who first claims that used oil that is to be burned for energy recovery meets the fuel specifications under section 33.1-24-05-611 must keep a record of each shipment of used oil to the facility to which it delivers the used oil. Records for each shipment must include the following information:

 a. The name and address of the facility receiving the shipment;

 b. The quantity of used oil fuel delivered;

 c. The date of shipment or delivery; and

 d. A cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specifications as required under subsection 1 of section 33.1-24-05-672.

3. **Record retention.** The records described in subsections 1 and 2 must be maintained for at least three years.

History: Effective , 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-675. Notices.

1. **Certification.** Before a used oil generator, transporter, or processor directs the first shipment of off-specification used oil fuel to a burner, the generator, transporter, or processor must obtain a one-time written and signed notice from the burner certifying that:

 a. The burner has notified the department stating the location and general description of used oil management activities; and

 b. The burner will burn the off-specification used oil only in an industrial furnace or boiler identified in subsection 1 of section 33.1-24-05-661.

2. **Certification retention.** The certification described in subsection 1 must be maintained for three years from the date the last shipment of off-specification used oil is shipped to the burner.

History: Effective , 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-676. [Reserved]

33.1-24-05-677. [Reserved]

33.1-24-05-678. [Reserved]

33.1-24-05-679. [Reserved]

33.1-24-05-680. Applicability of standards for disposal of used oil.

The requirements of sections 33.1-24-05-680 through 33.1-24-05-689 apply to all used oils that cannot be recycled and are therefore being disposed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-681. Disposal.

1. **Disposal of hazardous used oils.** Used oils that are identified as a hazardous waste and cannot be recycled in accordance with sections 33.1-24-05-600 through 33.1-24-05-689 must be managed in accordance with the hazardous waste management requirements of article 33.1-24.
2. **Disposal of nonhazardous used oils.** Used oils that are not hazardous wastes and cannot be recycled under sections 33.1-24-05-600 through 33.1-24-05-689 must be disposed in accordance with the requirements of article 33.1-20.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-682. [Reserved]

33.1-24-05-683. [Reserved]

33.1-24-05-684. [Reserved]

33.1-24-05-685. [Reserved]

33.1-24-05-686. [Reserved]

33.1-24-05-687. [Reserved]

33.1-24-05-688. [Reserved]

33.1-24-05-689. [Reserved]

33.1-24-05-690. [Reserved]

33.1-24-05-691. [Reserved]

33.1-24-05-692. [Reserved]

33.1-24-05-693. [Reserved]

33.1-24-05-694. [Reserved]

33.1-24-05-695. [Reserved]

33.1-24-05-696. [Reserved]

33.1-24-05-697. [Reserved]

33.1-24-05-698. [Reserved]

33.1-24-05-699. [Reserved]

33.1-24-05-700. [Reserved]

33.1-24-05-701. Scope of universal waste rule.

1. Sections 33.1-24-05-700 through 33.1-24-05-799 establish requirements for managing the following:
 - a. Batteries as described in section 33.1-24-05-702;
 - b. Pesticides as described in section 33.1-24-05-703;
 - c. Mercury containing equipment as described in section 33.1-24-05-704; and
 - d. Lamps as described in section 33.1-24-05-705.
2. Sections 33.1-24-05-700 through 33.1-24-05-799 provide an alternative set of management standards in lieu of regulation under chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-702. Applicability - Batteries.

1. **Batteries covered under sections 33.1-24-05-700 through 33.1-24-05-799.**
 - a. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 apply to persons managing batteries as described in section 33.1-24-01-04, except as those listed in subsection 2.
 - b. Spent lead-acid batteries which are not managed under sections 33.1-24-05-235 through 33.1-24-05-249 are subject to management under sections 33.1-24-05-700 through 33.1-24-05-799.
2. **Batteries not covered under sections 33.1-24-05-700 through 33.1-24-05-799.** The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 do not apply to persons managing the following batteries:
 - a. Spent lead-acid batteries that are managed under sections 33.1-24-05-235 through 33.1-24-05-249.
 - b. Batteries, as described in section 33.1-24-01-04, that are not yet wastes under chapter 33.1-24-02, including those that do not meet the criteria for waste generation in subsection 3.
 - c. Batteries, as described in section 33.1-24-01-04, that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14.

3. Generation of waste batteries.

- a. A used battery becomes a waste on the date it is discarded (for example, when sent for reclamation).
- b. An unused battery becomes a waste on the date the handler decides to discard it.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-703. Applicability - Pesticides.

1. Pesticides covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 apply to persons managing pesticides, as described in section 33.1-24-01-04, meeting the following conditions, except those listed in subsection 2:

a. Recalled pesticides that are:

- (1) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under federal Insecticide, Fungicide, and Rodenticide Act section 19(b), including, but not limited to, those owned by the registrant responsible for conducting the recall; or
- (2) Stocks of a suspended or canceled pesticide, or a pesticide that is not in compliance with federal Insecticide, Fungicide, and Rodenticide Act, that are part of a voluntary recall by the registrant.

b. Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

2. Pesticides not covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 do not apply to persons managing the following pesticides:

- a. Recalled pesticides described in subdivision a of subsection 1, and unused pesticide products described in subdivision b of subsection 1, that are managed by farmers in compliance with section 33.1-24-03-40.
- b. Pesticides not meeting the conditions set forth in subsection 1. These pesticides must be managed in compliance with the hazardous waste regulations in chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149;
- c. Pesticides that are not wastes under chapter 33.1-24-02, including those that do not meet the criteria for waste generation in subsection 3 or those that are not wastes as described in subsection 4; and
- d. Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in sections 33.1-24-02-15 through 33.1-24-02-19 or if it exhibits one or more of the characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14.

3. When a pesticide becomes a waste.

a. A recalled pesticide described in subdivision a of subsection 1 becomes a waste on the first date on which both of the following conditions apply:

(1) The generator of the recalled pesticide agrees to participate in the recall; and

(2) The person conducting the recall decides to discard the pesticide (for example, burn the pesticide for energy recovery).

b. An unused pesticide product described in subdivision b of subsection 1 becomes a waste on the date the generator decides to discard it.

4. Pesticides that are not wastes. The following pesticides are not wastes:

a. Recalled pesticides described in subdivision a of subsection 1 provided that the person conducting the recall:

(1) Has not made a decision to discard the pesticide (for example, burn for energy recovery). Until such a decision is made, the pesticide does not meet the definition of "solid waste" under section 33.1-24-02-02; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including sections 33.1-24-05-700 through 33.1-24-05-799. This pesticide remains subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act; or

(2) Has made a decision to use a management option that, under section 33.1-24-02-02, does not cause the pesticide to be a solid waste (for example, the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery) or reclamation). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to hazardous waste requirements including sections 33.1-24-05-700 through 33.1-24-05-799. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act.

b. Unused pesticide products described in subdivision b of subsection 1, if the generator of the unused pesticide product has not decided to discard them (for example, burn for energy recovery). These pesticides remain subject to the requirements of federal Insecticide, Fungicide, and Rodenticide Act.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-704. Applicability - Mercury containing equipment.

1. Mercury containing equipment covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 apply to persons managing mercury containing equipment, as described in section 33.1-24-01-04, except those listed in subsection 2.

2. Mercury containing equipment not covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-

24-05-799 do not apply to persons managing the following mercury containing equipment:

- a. Mercury containing equipment that is not yet a waste under chapter 33.1-24-02. Subsection 3 describes when mercury containing equipment becomes a waste;
- b. Mercury containing equipment that is not a hazardous waste. Mercury containing equipment is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14 or is listed in sections 33.1-24-02-15 through 33.1-24-02-19; and
- c. Equipment and devices from which the mercury containing components have been removed.

3. Generation of waste mercury containing equipment.

- a. Used mercury containing equipment becomes a waste on the date it is discarded.
- b. Unused mercury containing equipment becomes a waste on the date the handler decides to discard it.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-705. Applicability - Lamps.

1. Lamps covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 apply to persons managing lamps as described in section 33.1-24-01-04, except those listed in subsection 2.
2. Lamps not covered under sections 33.1-24-05-700 through 33.1-24-05-799. The requirements of sections 33.1-24-05-700 through 33.1-24-05-799 do not apply to persons managing the following lamps:
 - a. Lamps that are not yet wastes under chapter 33.1-24-02 as provided in subsection 3.
 - b. Lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in sections 33.1-24-02-10 through 33.1-24-02-14.
3. Generation of waste lamps.
 - a. A used lamp becomes a waste on the date it is discarded.
 - b. An unused lamp becomes a waste on the date the handler decides to discard it.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-706. [Reserved]

33.1-24-05-707. [Reserved]

33.1-24-05-708. Applicability - Household and conditionally exempt small quantity generator waste.

1. Persons managing the wastes listed below may, at their option, manage them under the requirements of sections 33.1-24-05-700 through 33.1-24-05-799:
 - a. Household wastes that are exempt under subdivision a of subsection 2 of section 33.1-24-02-04 and are also of the same type as the universal wastes defined in section 33.1-24-01-04; or
 - b. Conditionally exempt small quantity generator wastes that are exempt under section 33.1-24-02-05 and are also of the same type as the universal wastes defined in section 33.1-24-01-04.
2. Persons who commingle the wastes described in subdivisions a and b of subsection 1 together with universal waste regulated under sections 33.1-24-05-700 through 33.1-24-05-799 must manage the commingled waste under the requirements of sections 33.1-24-05-700 through 33.1-24-05-799.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-709. Definitions.

Terms that are defined in sections 33.1-24-01-04 and 33.1-24-02-01 and chapter 33.1-24-05 have the same meanings when used in sections 33.1-24-05-700 through 33.1-24-05-799.

1. "Ampule" means an airtight vial made of glass, plastic, metal, or any combination of these materials.
2. "FIFRA" means the Federal Insecticide, Fungicide and Rodenticide Act [7 United States Code 136-136y].
3. "Large quantity handler of universal waste" means a universal waste handler (as defined in section 33.1-24-01-04) who accumulates five thousand kilograms or more total of universal waste (batteries, pesticides, lamps, or mercury containing equipment, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the five thousand kilogram limit is met or exceeded.
4. "Small quantity handler of universal waste" means a universal waste handler (as defined in section 33.1-24-01-04) who does not accumulate five thousand kilograms or more total of universal waste (batteries, pesticides, lamps, or mercury containing equipment, calculated collectively) at any time.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-710. Applicability - Small quantity handlers of universal waste.

Sections 33.1-24-05-710 through 33.1-24-05-720 apply to small quantity handlers of universal waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-711. Prohibitions.

A small quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and
2. Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33.1-24-05-717; or by managing specific wastes as provided in section 33.1-24-05-713.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-712. Notification.

A small quantity handler of universal waste is not required to notify the department of universal waste handling activities.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-713. Waste management.

1. **Universal waste batteries.** A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
 - a. A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
 - b. A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
 - (1) Sorting batteries by type;
 - (2) Mixing battery types in one container;

- (3) Discharging batteries so as to remove the electric charge;
 - (4) Regenerating used batteries;
 - (5) Disassembling batteries or battery packs into individual batteries or cells;
 - (6) Removing batteries from consumer products; or
 - (7) Removing electrolyte from batteries.
- c. A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (for example, battery pack materials, discarded consumer products) as a result of the activities listed in subdivision b, must determine whether the electrolyte or other solid waste, or both, exhibit one or more of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14.
- (1) If the electrolyte or other solid waste, or both, exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the hazardous electrolyte or other hazardous waste, or both, and is subject to the requirements of chapter 33.1-24-03.
 - (2) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in compliance with applicable federal, state, or local solid waste regulations.
2. **Universal waste pesticides.** A small quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:
- a. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;
 - b. A container that does not meet the requirements of subdivision a, provided that the unacceptable container is overpacked in a container that does meet the requirements of subdivision a;
 - c. A tank that meets the requirements of sections 33.1-24-05-103 through 33.1-24-05-117, except subsection 3 of section 33.1-24-06-110 and sections 33.1-24-05-113 and 33.1-24-05-114; or
 - d. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
3. **Mercury containing equipment.** A small quantity handler of universal waste must manage universal waste mercury containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A small quantity handler of universal waste must place in a container any universal waste mercury containing equipment with noncontained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonable foreseeable conditions. The container must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.
- b. A small quantity handler of universal waste may remove mercury containing ampules or other reservoirs from universal waste mercury containing equipment provided the handler:
- (1) Removes and manages the ampules or other reservoirs in a manner designed to prevent breakage of the ampules or other reservoirs;
 - (2) Removes the ampules or other reservoirs only over or in a containment device (for example, a tray or pan sufficient to collect and contain any mercury released from an ampule or other reservoir in case of breakage);
 - (3) Ensures that a mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules or other reservoirs from that containment device to a container that meets the requirements of section 33.1-24-03-12;
 - (4) Immediately transfers any mercury resulting from spills or leaks from broken ampules or other reservoirs from the containment device to a container that meets the requirements of section 33.1-24-03-12;
 - (5) Ensures that the area in which ampules or other reservoirs are removed is well-ventilated and monitored to ensure compliance with applicable occupational safety and health administration exposure levels for mercury;
 - (6) Ensures that employees removing ampules or other reservoirs are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
 - (7) Stores removed ampules or other reservoirs in closed, nonleaking containers that are in good condition; and
 - (8) Packs removed ampules or other reservoirs in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.
- c. A small quantity handler of universal waste mercury containing equipment that does not contain an ampule or other reservoirs may remove the open original housing holding the mercury from universal waste mercury containing equipment provided the handler:
- (1) Immediately seals the original housing holding the mercury with an airtight seal to prevent the release of any mercury to the environment; and

- (2) Follows all requirements for removing ampules or other reservoirs and managing removed ampules or other reservoirs under subdivision b.
- d. A small quantity handler of universal waste who removes mercury containing ampules or other reservoirs from mercury containing equipment or seals mercury from mercury containing equipment in its original housing must:
- (1) Determine whether the following exhibit a characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14:
- (a) Mercury or cleanup residues resulting from spills or leaks;
- (b) Other solid waste generated as a result of the removal of mercury containing ampules or other reservoirs or housings (for example, the remaining mercury containing device); or
- (c) Both.
- (2) If the mercury, residues, or other solid waste, or any combination thereof, exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the mercury, residues, or other solid waste, or any combination thereof, and must manage it in compliance with chapter 33.1-24-03.
- (3) If the mercury, residues, or other solid waste, or any combination thereof, is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.
4. Lamps. A small quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
- a. A small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- b. A small quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage, or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-714. Labeling and marking.

A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

1. Universal waste batteries (for example, each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)", or "Waste Battery(ies)", "Used Battery(ies)".
2. A container, (or multiple container package unit), tank, or transport vehicle or vessel in which recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33.1-24-05-703 are contained must be labeled or marked clearly with:
 - a. The label that was on or accompanied the product as sold or distributed; and
 - b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".
3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subdivision b of subsection 1 of section 33.1-24-05-703 are contained must be labeled or marked clearly with:
 - a. The following:
 - (1) The label that was on the product when purchased, if still legible;
 - (2) If using the labels described in paragraph 1 is not feasible, the appropriate label as required under department of transportation regulation 49 CFR part 172; or
 - (3) If using the labels described in paragraphs 1 and 2 is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by the state; and
 - b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".
4. Universal waste mercury containing equipment (for example, each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: "Universal Waste - Mercury Containing Equipment", "Waste Mercury Containing Equipment", or "Used Mercury Containing Equipment". A universal waste mercury containing thermostat or container containing only universal waste mercury containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste - Mercury Thermostat(s)", "Waste Mercury Thermostat(s)", or "Used Mercury Thermostat(s)".
5. Each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-715. Accumulation time limits.

1. A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of subsection 2 are met.
2. A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
3. A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
 - a. Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
 - b. Marking or labeling each individual item of universal waste (for example, each battery or mercury containing device) with the date it became a waste or was received;
 - c. Maintaining an inventory system onsite that identifies the date each universal waste became a waste or was received;
 - d. Maintaining an inventory system onsite that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
 - e. Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received;
or
 - f. Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-716. Employee training.

A small quantity handler of universal waste shall inform all employees who handle or have responsibility for managing universal waste. The information must describe proper waste handling and emergency procedures appropriate for the type or types of universal waste handled at the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-717. Response to releases.

1. A small quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.
2. A small quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with chapter 33.1-24-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-718. Offsite shipments.

1. A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
2. If a small quantity handler of universal waste self-transportes universal waste offsite, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of sections 33.1-24-05-750 through 33.1-24-05-759 while transporting the universal waste.
3. If a universal waste being offered for offsite transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a small quantity handler of universal waste must package, label, mark, and placard the shipment and prepare the proper shipping papers in accordance with applicable department of transportation regulations under 49 CFR parts 172 through 180.
4. Prior to sending a shipment of universal waste to another universal waste handler, the originating small quantity handler shall ensure that the receiving handler agrees to receive the shipment.
5. If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:
 - a. Receive the universal waste back when notified that the shipment has been rejected; or
 - b. Agree with the receiving handler on a destination facility to which the shipment will be sent.
6. A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that the handler has received from another handler. If a handler rejects a shipment or a portion of a shipment,

the receiving handler shall contact the originating handler to notify the originating handler of the rejection and to discuss reshipment of the load. The receiving handler must:

- a. Send the shipment back to the originating handler; or
- b. If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

7. If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

8. If a small quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local waste regulations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-719. Tracking universal waste shipments.

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-720. Exports.

A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those Organization for Economic Cooperation and Development countries specified in subdivision a of subsection 1 of section 33.1-24-03-25 (in which case the handler is subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59) shall:

1. Comply with the requirements applicable to a primary exporter in section 33.1-24-03-20, subdivisions a through d and f of subsection 1 and subsection 2 of section 33.1-24-03-23, and section 33.1-24-03-24;
2. Export such universal waste only upon consent of the receiving country and in conformance with environmental protection agency acknowledgment of consent as defined in sections 33.1-24-03-17 through 33.1-24-03-29; and
3. Provide a copy of the environmental protection agency acknowledgment of consent for the shipment to the transporter transporting the shipment for export.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-721. [Reserved]

33.1-24-05-722. [Reserved]

33.1-24-05-723. [Reserved]

33.1-24-05-724. [Reserved]

33.1-24-05-725. [Reserved]

33.1-24-05-726. [Reserved]

33.1-24-05-727. [Reserved]

33.1-24-05-728. [Reserved]

33.1-24-05-729. [Reserved]

33.1-24-05-730. Applicability - Large quantity handlers of universal waste.

Sections 33.1-24-05-730 through 33.1-24-05-740 apply to large quantity handlers of universal waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-731. Prohibitions.

A large quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and
2. Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33.1-24-05-737, or by managing specific wastes as provided in section 33.1-24-05-733.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-732. Notification.

1. A large quantity handler of universal waste must:
 - a. Except as provided in subdivisions b and c, send written notification of universal waste management activities to the department, and receive an identification number before meeting or exceeding the five thousand kilogram storage limit.
 - b. A large quantity handler of universal waste who has already notified the department of the person's hazardous waste management activities and received an identification number is not required to renotify.
 - c. A large quantity handler of universal waste who manages recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33.1-24-05-703 and who has sent notification to the environmental protection agency as required

by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides.

2. This notification must include:

- a. The universal waste handler's name and mailing address;
- b. The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;
- c. The address or physical location of the universal waste management activities;
- d. A list of all types of universal waste managed by the handler (for example, batteries, pesticides, mercury containing equipment, lamps); and
- e. A statement indicating that the handler is accumulating more than five thousand kilograms of universal waste at one time.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-733. Waste management.

1. Universal waste batteries. A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- b. A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
 - (1) Sorting batteries by type;
 - (2) Mixing battery types in one container;
 - (3) Discharging batteries so as to remove the electric charge;
 - (4) Regenerating used batteries;
 - (5) Disassembling batteries or battery packs into individual batteries or cells;
 - (6) Removing batteries from consumer products; or
 - (7) Removing electrolyte from batteries.

c. A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (for example, battery pack materials, discarded consumer products) as a result of the activities listed in subdivision b, must determine whether the electrolyte or other solid waste, or both, exhibit one or more of the characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14.

(1) If the electrolyte or other solid waste, or both, exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the hazardous electrolyte or other hazardous waste and is subject to the requirements of chapter 33.1-24-03.

(2) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in compliance with applicable federal, state, or local solid waste regulations.

2. Universal waste pesticides. A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

a. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions;

b. A container that does not meet the requirements of subdivision a, provided that the unacceptable container is overpacked in a container that does meet the requirements of subdivision a;

c. A tank that meets the requirements of sections 33.1-24-05-103 through 33.1-24-05-117, except subsection 3 of section 33.1-24-06-110 and sections 33.1-24-05-113 and 33.1-24-05-114; or

d. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

3. Mercury containing equipment. A large quantity handler of universal waste must manage universal waste mercury containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

a. A large quantity handler of universal waste must place in a container any universal waste mercury containing equipment with noncontained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

b. A large quantity handler of universal waste may remove mercury containing ampules or other reservoirs from universal waste mercury containing equipment provided the handler:

- (1) Removes and manages the ampules or other reservoirs in a manner designed to prevent breakage of the ampules or other reservoirs;
- (2) Removes the ampules or other reservoirs only over or in a containment device (for example, tray or pan sufficient to collect and contain any mercury released from an ampule or other reservoir in case of breakage);
- (3) Ensures that a mercury cleanup system is readily available to immediately transfer any mercury resulting from spills or leaks of broken ampules or other reservoirs from that containment device to a container that meets the requirements of section 33.1-24-03-12;
- (4) Immediately transfers any mercury resulting from spills or leaks from broken ampules or other reservoirs from the containment device to a container that meets the requirements of section 33.1-24-03-12;
- (5) Ensures that the area in which ampules or other reservoirs are removed is well-ventilated and monitored to ensure compliance with applicable occupational safety and health administration exposure levels for mercury;
- (6) Ensures that employees removing ampules or other reservoirs are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
- (7) Stores removed ampules or other reservoirs in closed, nonleaking containers that are in good condition; and
- (8) Packs removed ampules or other reservoirs in the container with packing materials adequate to prevent breakage during storage, handling, and transportation.

c. A large quantity handler of universal waste mercury containing equipment that does not contain an ampule or other reservoirs may remove the open original housing holding the mercury from universal waste mercury containing equipment provided the handler:

- (1) Immediately seals the original housing holding the mercury with an airtight seal to prevent the release of any mercury to the environment; and
- (2) Follows all requirements for removing ampules and managing removed ampules under subdivision b.

d. A large quantity handler of universal waste who removes mercury containing ampules or other reservoirs from mercury containing equipment or seals mercury from mercury containing equipment in its original housing must:

- (1) Determine whether the following exhibit a characteristic of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14:

- (a) Mercury or cleanup residues resulting from spills or leaks;
 - (b) Other solid waste generated as a result of the removal of mercury containing ampules or other reservoirs or housings (for example, the remaining mercury containing device); or
 - (c) Both.
- (2) If the mercury, residues, or other solid waste, or any combination thereof, exhibits a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the mercury, residues, or other solid waste, or any combination thereof, and must manage it in compliance with chapter 33.1-24-03.
- (3) If the mercury, residues, or other solid waste, or any combination thereof, is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.

4. **Lamps.** A large quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

- a. A large quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
- b. A large quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage, or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

History: Effective _____, 2018.
General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-734. Labeling and marking.

A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

- 1. Universal waste batteries (for example, each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)", or "Waste Battery(ies)", or "Used Battery(ies)".

2. A container (or multiple container package unit), tank, or transport vehicle or vessel in which recalled universal waste pesticides as described in subdivision a of subsection 1 of section 33.1-24-05-703 are contained must be labeled or marked clearly with:

a. The label that was on or accompanied the product as sold or distributed; and

b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".

3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subdivision b of subsection 1 of section 33.1-24-05-703 are contained must be labeled or marked clearly with:

a. The following:

(1) The label that was on the product when purchased, if still legible;

(2) If using the labels described in paragraph 1 is not feasible, the appropriate label as required under department of transportation regulation 49 CFR part 172; or

(3) If using the labels described in paragraphs 1 and 2 is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by the state; and

b. The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)".

4. Mercury containing equipment (for example, each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: "Universal Waste - Mercury Containing Equipment", "Waste Mercury Containing Equipment", or "Used Mercury Containing Equipment". A universal waste mercury containing thermostat or container containing only universal waste mercury containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste - Mercury Thermostat(s)", "Waste Mercury Thermostat(s)", or "Used Mercury Thermostat(s)".

5. Each lamp or a container or package in which such lamps are contained must be labeled or marked clearly with one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)".

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-735. Accumulation time limits.

1. A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of subsection 2 are met.

2. A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the

purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

3. A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
 - a. Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
 - b. Marking or labeling each individual item of universal waste (for example, each battery or mercury containing equipment) with the date it became a waste or was received;
 - c. Maintaining an inventory system onsite that identifies the date each universal waste became a waste or was received;
 - d. Maintaining an inventory system onsite that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
 - e. Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received;
or
 - f. Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-736. Employee training.

A large quantity handler of universal waste shall ensure all employees who handle or have responsibility for managing universal waste are thoroughly familiar with proper waste handling and emergency procedures appropriate for the type or types of universal waste handled at the facility, and relative to their responsibilities during normal facility operations and emergencies.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-737. Response to releases.

1. A large quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.
2. A large quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and

33.1-24-05-800 through 33.1-24-05-1149. The handler is considered the generator of the material resulting from the release, and is subject to chapter 33.1-24-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-738. Offsite shipments.

1. A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
2. If a large quantity handler of universal waste self-transport universal waste offsite, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of sections 33.1-24-05-750 through 33.1-24-05-759 while transporting the universal waste.
3. If a universal waste being offered for offsite transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a large quantity handler of universal waste must package, label, mark, and placard the shipment and prepare the proper shipping papers in accordance with applicable department of transportation regulations under 49 CFR parts 172 through 180.
4. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.
5. If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:
 - a. Receive the universal waste back when notified that the shipment has been rejected; or
 - b. Agree with the receiving handler on a destination facility to which the shipment will be sent.
6. A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that the handler has received from another handler. If a handler rejects a shipment or a portion of a shipment, the receiving handler shall contact the originating handler to notify the originating handler of the rejection and to discuss reshipment of the load. The receiving handler must:
 - a. Send the shipment back to the originating handler; or
 - b. If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
7. If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.

8. If a large quantity handler of universal waste receives a shipment of nonhazardous, nonuniversal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state, or local solid waste regulations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-739. Tracking universal waste shipments.

1. **Receipt of shipments.** A large quantity handler of universal waste shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

- a. The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
- b. The quantity of each type of universal waste received (for example, batteries, pesticides, mercury containing equipment, lamps); and
- c. The date of receipt of the shipment of universal waste.

2. **Shipments offsite.** A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:

- a. The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
- b. The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing equipment, lamps); and
- c. The date the shipment of universal waste left the facility.

3. **Record retention.**

- a. A large quantity handler of universal waste shall retain the records described in subsection 1 for at least three years from the date of receipt of the shipment of universal waste.
- b. A large quantity handler of universal waste shall retain the records described in subsection 2 for at least three years from the date a shipment of universal waste left the facility.
- c. The retention period for all records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-740. Exports.

A large quantity handler of universal waste who sends universal waste to a foreign destination other than those Organization for Economic Cooperation and Development countries specified in subdivision a of subsection 1 of section 33.1-24-03-25 (in which case the handler is subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59) shall:

1. Comply with the requirements applicable to a primary exporter in section 33.1-24-03-20, subdivisions a through d and f of subsection 1 and subsection 2 of section 33.1-24-03-23, and section 33.1-24-03-24;
2. Export such universal waste only upon consent of the receiving country and in conformance with environmental protection agency acknowledgment of consent as defined in sections 33.1-24-03-17 through 33.1-24-03-29; and
3. Provide a copy of the environmental protection agency acknowledgment of consent for the shipment to the transporter transporting the shipment for export.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-741. [Reserved]

33.1-24-05-742. [Reserved]

33.1-24-05-743. [Reserved]

33.1-24-05-744. [Reserved]

33.1-24-05-745. [Reserved]

33.1-24-05-746. [Reserved]

33.1-24-05-747. [Reserved]

33.1-24-05-748. [Reserved]

33.1-24-05-749. [Reserved]

33.1-24-05-750. Applicability - Universal waste transporters.

Sections 33.1-24-05-750 through 33.1-24-05-759 apply to all transporters of universal waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-751. Prohibitions.

A universal waste transporter is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by responding to releases as provided by section 33.1-24-05-754.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-752. Waste management.

1. A universal waste transporter shall comply with all applicable United States department of transportation regulations in 49 CFR parts 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the department of transportation regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements specified in chapter 33.1-24-03. Because universal waste does not require a hazardous waste manifest, it is not considered a hazardous waste under the department of transportation regulations.
2. Some universal waste materials are regulated by the department of transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under chapter 33.1-24-03, they may not be described by the department of transportation proper shipping name "hazardous waste (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".
3. All universal waste transporters shall comply with the solid waste transportation permitting requirements contained in section 33.1-20-02.1-01.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-753. Storage time limits.

1. A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
2. If a universal waste transporter stores universal waste for more than ten days, the universal waste transporter becomes a universal waste handler and must comply with the requirements of sections 33.1-24-05-710 through 33.1-24-05-740, as applicable, while storing the universal waste.
3. A universal waste transporter must keep records for each shipment of universal waste transported. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste sent must include the following information:
 - a. The name and address of the universal waste generator or handler originating the shipment and the subsequent handler, destination facility, or foreign destination to whom the universal waste was sent;
 - b. The quantity of each type of universal waste sent (for example, batteries, pesticides, mercury containing equipment); and

c. The date the universal waste transporter accepted the shipment of universal waste for transportation.

4. Record retention. A universal waste transporter shall retain the records described in subsection 3 for at least three years from the date of delivery of the shipment of universal waste to another handler, destination facility, or foreign destination.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-754. Response to releases.

1. A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.

2. A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, is subject to all applicable requirements of chapters 33.1-24-01 through 33.1-24-04, chapter 33.1-24-06, sections 33.1-24-05-01 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-1149. If the waste is determined to be hazardous waste, the transporter is subject to chapter 33.1-24-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-755. Offsite shipments.

1. A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.

2. If the universal waste being shipped offsite meets the department of transportation's definition of hazardous materials in 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable department of transportation regulations under 49 CFR part 172.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-756. Exports.

A universal waste transporter transporting a shipment of universal waste to a foreign destination other than those Organization for Economic Cooperation and Development countries specified in subdivision a of subsection 1 of section 33.1-24-03-25 (in which case the handler is subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59) may not accept a shipment if the transporter knows the shipment does not conform to the environmental protection agency acknowledgment of consent. In addition, the transporter must ensure that:

1. A copy of the environmental protection agency acknowledgment of consent accompanies the shipment; and

2. The shipment is delivered to the facility designated by the person initiating the shipment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-757. [Reserved]

33.1-24-05-758. [Reserved]

33.1-24-05-759. [Reserved]

33.1-24-05-760. Applicability - Destination facilities.

1. The owner or operator of a destination facility (as defined in section 33.1-24-01-04) is subject to all applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929 and chapters 33.1-24-06 and 33.1-24-07, and the notification requirement under section 33.1-24-03-03.
2. The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with subdivision b of subsection 3 of section 33.1-24-02-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-761. Offsite shipments.

1. The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility, or foreign destination.
2. The owner or operator of a destination facility may reject a shipment containing universal waste or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, the destination facility must contact the shipper to notify the shipper of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall:
 - a. Send the shipment back to the original shipper; or
 - b. If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.
3. If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the department of the illegal shipment, and provide the name, address, and telephone number of the originating shipper. The department will provide instructions for managing the hazardous waste.
4. If the owner or operator of a destination facility receives a shipment of nonhazardous, nonuniversal waste, the owner or operator of the destination facility may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-762. Tracking universal waste shipments.

1. The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
 - a. The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
 - b. The quantity of each type of universal waste received (for example, batteries, pesticides, mercury containing equipment); and
 - c. The date of receipt of the shipment of universal waste.
2. The owner or operator of a destination facility must retain the records described in subsection 1 for at least three years from the date of receipt of a shipment of universal waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-763. [Reserved]

33.1-24-05-764. [Reserved]

33.1-24-05-765. [Reserved]

33.1-24-05-766. [Reserved]

33.1-24-05-767. [Reserved]

33.1-24-05-768. [Reserved]

33.1-24-05-769. [Reserved]

33.1-24-05-770. Imports.

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of sections 33.1-24-05-700 through 33.1-24-05-799, immediately after the waste enters the United States, as indicated in subsections 1 through 3:

1. A universal waste transporter is subject to the universal waste transporter requirements of sections 33.1-24-05-750 through 33.1-24-05-759.
2. A universal waste handler is subject to the universal waste handler requirements of sections 33.1-24-05-710 through 33.1-24-05-740, as applicable.
3. An owner or operator of a destination facility is subject to the destination facility requirements of sections 33.1-24-05-760 through 33.1-24-05-762.

4. Persons managing universal waste that is imported from an Organization for Economic Cooperation and Development country as specified in subdivision a of subsection 1 of section 33.1-24-03-25 are subject to subsections 1 through 3, in addition to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-771. [Reserved]

33.1-24-05-772. [Reserved]

33.1-24-05-773. [Reserved]

33.1-24-05-774. [Reserved]

33.1-24-05-775. [Reserved]

33.1-24-05-776. [Reserved]

33.1-24-05-777. [Reserved]

33.1-24-05-778. [Reserved]

33.1-24-05-779. [Reserved]

33.1-24-05-780. Petitions to include other wastes under sections 33.1-24-05-700 through 33.1-24-05-799.

1. Any person seeking to add a hazardous waste or a category of hazardous waste to sections 33.1-24-05-700 through 33.1-24-05-799 may petition for a regulatory amendment under sections 33.1-24-05-780 through 33.1-24-05-781, 33.1-24-01-06, and 33.1-24-01-08.
2. To be successful, the petitioner must demonstrate to the satisfaction of the department that regulation under the universal waste regulations of sections 33.1-24-05-700 through 33.1-24-05-799 is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must include the information required by subsection 2 of section 33.1-24-01-06. The petition should also address as many of the factors listed in section 33.1-24-05-781 as are appropriate for the waste or waste category addressed in the petition.
3. The department will evaluate petitions using the factors listed in section 33.1-24-05-781. The department will grant or deny a petition using the factors listed in section 33.1-24-05-781. The decision will be based on the weight of evidence showing that regulation under sections 33.1-24-05-700 through 33.1-24-05-799 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-781. Factors for petitions to include other wastes under sections 33.1-24-05-700 through 33.1-24-05-799.

1. The waste or category of waste, as generated by a wide variety of generators, is listed in sections 33.1-24-02-15 through 33.1-24-02-19, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in sections 33.1-24-02-10 through 33.1-24-02-14. (When a characteristic waste is added to the universal waste regulations of sections 33.1-24-05-700 through 33.1-24-05-799 by using a generic name to identify the waste category (for example, batteries), the definition of universal waste in section 33.1-24-01-04 will be amended to include only the hazardous waste portion of the waste category (for example, hazardous waste batteries.) Thus, only the portion of the waste stream that does exhibit one or more characteristics (therefore, is hazardous waste) is subject to the universal waste regulations of sections 33.1-24-05-700 through 33.1-24-05-799;
2. The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities);
3. The waste or category of waste is generated by a large number of generators (for example, more than one thousand nationally) and is frequently generated in relatively small quantity by each generator;
4. Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;
5. The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (for example, waste management requirements appropriate to be added to sections 33.1-24-05-713, 33.1-24-05-733, and 33.1-24-05-752; or applicable department of transportation requirements) would be protective of human health and the environment during accumulation and transport;
6. Regulation of the waste or category of waste under sections 33.1-24-05-700 through 33.1-24-05-799 will increase the likelihood that the waste will be diverted from the nonhazardous waste management systems (for example, the municipal waste stream, nonhazardous industrial or commercial waste stream, municipal sewer, or stormwater systems) to recycling, treatment, or disposal in compliance with the hazardous waste management rules;
7. Regulation of the waste or category of waste under sections 33.1-24-05-700 through 33.1-24-05-799 will improve implementation of the hazardous waste regulatory program; and
8. Such other factors as may be appropriate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-782. [Reserved]

33.1-24-05-783. [Reserved]

33.1-24-05-784. [Reserved]

33.1-24-05-785. [Reserved]

33.1-24-05-786. [Reserved]

33.1-24-05-787. [Reserved]

33.1-24-05-788. [Reserved]

33.1-24-05-789. [Reserved]

33.1-24-05-790. [Reserved]

33.1-24-05-791. [Reserved]

33.1-24-05-792. [Reserved]

33.1-24-05-793. [Reserved]

33.1-24-05-794. [Reserved]

33.1-24-05-795. [Reserved]

33.1-24-05-796. [Reserved]

33.1-24-05-797. [Reserved]

33.1-24-05-798. [Reserved]

33.1-24-05-799. [Reserved]

33.1-24-05-800. Applicability - Military munitions.

The requirements of sections 33.1-24-05-800 through 33.1-24-05-819 apply to owners or operators who store munitions and explosive hazardous wastes, except as section 33.1-24-05-01 provides otherwise. (Note: Depending on explosive hazards, hazardous waste munitions and explosives may also be managed in other types of storage units, including containment buildings (sections 33.1-24-05-475 through 33.1-24-05-500), tanks (sections 33.1-24-05-103 through 33.1-24-05-117), or containers (sections 33.1-24-05-89 through 33.1-24-05-102); see section 33.1-24-05-825 for storage of waste military munitions.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-801. Design and operating standards.

1. Hazardous waste munitions and explosives storage units must be designed and operated with containment systems, controls, and monitoring, that:
 - a. Minimize the potential for detonation or other means of release of hazardous waste, hazardous constituents, hazardous decomposition products, or contaminated runoff to the soil, ground water, surface water, and atmosphere;

- b. Provide a primary barrier, which may be a container (including a shell) or tank, designed to contain the hazardous waste;
 - c. For wastes stored outdoors, provide that the waste and containers will not be in standing precipitation;
 - d. For liquid wastes, provide a secondary containment system that assures that any released liquids are contained and promptly detected and removed from the waste area, or vapor detection system that assures that any released liquids or vapors are promptly detected and an appropriate response taken (for example, additional containment, such as overpacking, or removal from the waste area); and
 - e. Provide monitoring and inspection procedures that assure the controls and containment systems are working as designed and that releases that may adversely impact human health or the environment are not escaping from the unit.
2. Hazardous waste munitions and explosives stored under sections 33.1-24-05-800 through 33.1-24-05-819 may be stored in one of the following:
- a. Earth-covered magazines. Earth-covered magazines must be:
 - (1) Constructed of waterproofed, reinforced concrete or structural steel arches, with steel doors that are kept closed when not being accessed;
 - (2) Designed and constructed:
 - (a) To be of sufficient strength and thickness to support the weight of any explosives or munitions stored and any equipment used in the unit;
 - (b) To provide working space for personnel and equipment in the unit; and
 - (c) To withstand movement activities that occur in the unit; and
 - (3) Located and designed, with walls and earthen covers that direct an explosion in the unit in a safe direction, so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
 - b. Aboveground magazines. Aboveground magazines must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
 - c. Outdoor or open storage areas. Outdoor or open storage areas must be located and designed so as to minimize the propagation of an explosion to adjacent units and to minimize other effects of any explosion.
3. Hazardous waste munitions and explosives must be stored in accordance with a standard operating procedure specifying procedures to ensure safety, security, and environmental protection. If these procedures serve the same purpose as the security and inspection requirements of section 33.1-24-05-05, the preparedness and prevention procedures of sections 33.1-24-05-15 through 33.1-24-05-25, and the contingency plan and emergency procedures requirements of sections 33.1-24-05-26 through 33.1-24-05-36, then these procedures will be used to fulfill those requirements.

4. Hazardous waste munitions and explosives must be packaged to ensure safety in handling and storage.
5. Hazardous waste munitions and explosives must be inventoried at least annually.
6. Hazardous waste munitions and explosives and their storage units must be inspected and monitored as necessary to ensure explosives safety and to ensure that there is no migration of contaminants out of the unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-802. Closure and postclosure care.

1. At closure of a magazine or unit which stored hazardous waste under sections 33.1-24-05-800 through 33.1-24-05-819, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless subsection 4 of section 33.1-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for magazines or units must meet all of the requirements specified in sections 33.1-24-05-59 through 33.1-24-05-88, except that the owner or operator may defer closure of the unit as long as it remains in service as a munitions or explosives magazine or storage unit.
2. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in subsection 1, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, owner or operator must close the facility and perform postclosure care in accordance with the closure and postclosure requirements that apply to landfills in section 33.1-24-05-180.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-803. [Reserved]

33.1-24-05-804. [Reserved]

33.1-24-05-805. [Reserved]

33.1-24-05-806. [Reserved]

33.1-24-05-807. [Reserved]

33.1-24-05-808. [Reserved]

33.1-24-05-809. [Reserved]

33.1-24-05-810. [Reserved]

33.1-24-05-811. [Reserved]

33.1-24-05-812. [Reserved]

33.1-24-05-813. [Reserved]

33.1-24-05-814. [Reserved]

33.1-24-05-815. [Reserved]

33.1-24-05-816. [Reserved]

33.1-24-05-817. [Reserved]

33.1-24-05-818. [Reserved]

33.1-24-05-819. [Reserved]

33.1-24-05-820. Applicability.

1. The regulations in sections 33.1-24-05-820 through 33.1-24-05-849 identify when military munitions become a solid waste, and, if these wastes are also hazardous under sections 33.1-24-05-820 through 33.1-24-05-849 or chapter 33.1-24-02, the management standards that apply to these wastes.
2. Unless otherwise specified in sections 33.1-24-05-820 through 33.1-24-05-849, all applicable requirements in article 33.1-24 apply to waste military munitions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-821. Definitions.

In addition to the definitions in section 33.1-24-01-04, the following definitions apply to sections 33.1-24-05-820 through 33.1-24-05-849:

1. "Active range" means a military range that is currently in service and is being regularly used for range activities.
2. "Chemical agents and munitions" are defined as in 50 U.S.C. section 1521(j)(1).
3. "Inactive range" means a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.
4. "Military" means the department of defense, the armed services, coast guard, national guard, department of energy, or other parties under contract or acting as an agent for the foregoing, who handle military munitions.
5. "Military range" means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.

6. "Unexploded ordnance" means military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-822. Definition of solid waste.

1. A military munition is not a solid waste when:

- a. Used for its intended purpose, including:

- (1) Use in training military personnel or explosives and munitions emergency response specialists (including training in proper destruction of unused propellant or other munitions);
- (2) Use in research, development, testing, and evaluation of military munitions, weapons, or weapon systems; or
- (3) Recovery, collection, and on-range destruction of unexploded ordnance and munitions fragments during range clearance activities at active or inactive ranges. However, "use for intended purpose" does not include the on-range disposal or burial of unexploded ordnance and contaminants when the burial is not a result of product use.

- b. An unused munition, or component thereof, is being repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subjected to materials recovery activities, unless such activities involve use constituting disposal (as defined in subdivision a of subsection 3 of section 33.1-24-02-02) or burning for energy recovery (as defined in subdivision b of subsection 3 of section 33.1-24-02-02).

2. An unused military munition is a solid waste when any of the following occurs:

- a. The munition is abandoned by being disposed of, burned, detonated (except during intended use as specified in subsection 1), incinerated, or treated prior to disposal;
- b. The munition is removed from storage in a military magazine or other storage area for the purpose of being disposed of, burned, or incinerated, or treated prior to disposal;
- c. The munition is deteriorated or damaged (for example, the integrity of the munition is compromised by cracks, leaks, or other damage) to the point that it cannot be put into serviceable condition, and cannot reasonably be recycled or used for other purposes; or
- d. The munition has been declared a solid waste by an authorized military official.

3. A used or fired military munition is a solid waste:

- a. When transported off-range or from the site of use, where the site of use is not a range, for the purposes of storage, reclamation, treatment, disposal, or treatment prior to disposal; or
 - b. If recovered, collected, and then disposed of by burial, or landfilling either on or off a range.
4. For purposes of Resource Conservation and Recovery Act section 1004(27) or subsection 18 of North Dakota Century Code section 23.1-04-02, a used or fired military munition is a solid waste, and, therefore, is potentially subject to corrective action authorities under Resource Conservation and Recovery Act sections 3004(u) and (v), and 3008(h) or sections 33.1-24-05-57 and 33.1-24-05-58, or imminent and substantial endangerment authorities under section 7003, or North Dakota Century Code section 23.1-04-14, if the munition lands off-range and is not promptly rendered safe or retrieved, or both. Any imminent and substantial threats associated with any remaining material must be addressed. If remedial action is infeasible, the operator of the range must maintain a record of the event for as long as any threat remains. The record must include the type of munition and its location (to the extent the location is known).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-823. Standards applicable to the transportation of solid waste military munitions.

- 1. Criteria for hazardous waste regulation of waste nonchemical military munitions in transportation.
 - a. Waste military munitions that are being transported and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33.1-24-02 are listed or identified as a hazardous waste (and thus are subject to regulation under article 33.1-24), unless all the following conditions are met:
 - (1) The waste military munitions are not chemical agents or chemical munitions;
 - (2) The waste military munitions must be transported in accordance with the department of defense shipping controls applicable to the transport of military munitions;
 - (3) The waste military munitions must be transported from a military owned or operated installation to a military owned or operated treatment, storage, or disposal facility; and
 - (4) The transporter of the waste must provide oral notice to the department within twenty-four hours from the time the transporter becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this subdivision that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within five days from the time the transporter becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this subdivision.

b. If any waste military munitions shipped under subdivision a are not received by the receiving facility within forty-five days of the day the waste was shipped, the owner or operator of the receiving facility must report this nonreceipt to the department within five days.

c. The exemption in subdivision a from regulation as hazardous waste shall apply only to the transportation of nonchemical waste military munitions. It does not affect the regulatory status of waste military munitions as hazardous wastes with regard to storage, treatment, or disposal.

d. The conditional exemption in subdivision a applies only so long as all of the conditions in subdivision a are met.

2. Reinstatement of exemption. If any waste military munition loses its exemption under subdivision a of subsection 1, an application may be filed with the department for reinstatement of the exemption from hazardous waste transportation regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of subdivision a of subsection 1. If the department finds that reinstatement of the exemption is appropriate based on factors such as the transporter's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the exemption under subdivision a of subsection 1. If the department does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if the department finds that reinstatement is inappropriate based on factors such as the transporter's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the exemption under subdivision a of subsection 1, the department may specify additional conditions as are necessary to ensure and document proper transportation to protect human health and the environment.

3. Amendments to department of defense shipping controls. The department of defense shipping controls applicable to the transport of military munitions referenced in paragraph 2 of subdivision a of subsection 1 are government bill of lading (GSA standard form 1109), requisition tracking form (DD form 1348), the signature and tally record (DD form 1907), special instructions for motor vehicle drivers (DD form 836), and the motor vehicle inspection report (DD form 626) in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the department of defense shipping controls shall become effective for purposes of subdivision a of subsection 1 on the date the department of defense publishes notice in the federal register that the shipping controls referenced in paragraph 2 of subdivision a of subsection 1 have been amended.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-824. Standards applicable to emergency responses.

Explosives and munitions emergencies involving military munitions or explosives are subject to subsection 8 of section 33.1-24-03-01, subsection 5 of section 33.1-24-04-01, paragraph 1 of

subdivision g of subsection 6 of section 33.1-24-05-01, 40 CFR 265.1(c)(11) as incorporated by reference at subsection 5 of section 33.1-24-06-16, and paragraph 9 of subdivision b of subsection 2 of section 33.1-24-06-01, and subsection 1 of section 33.1-24-06-19.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-825. Standards applicable to the storage of solid waste military munitions.

1. Criteria for hazardous waste regulation of waste nonchemical military munitions in storage.

a. Waste military munitions in storage that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33.1-24-02 are listed or identified as a hazardous waste (and thus are subject to regulation under article 33.1-24), unless all the following conditions are met:

(1) The waste military munitions are not chemical agents or chemical munitions.

(2) The waste military munitions must be subject to the jurisdiction of the department of defense explosives safety board.

(3) The waste military munitions must be stored in accordance with the department of defense explosives safety board storage standards applicable to waste military munitions.

(4) Within ninety days of August 12, 1997, or within ninety days of when a storage unit is first used to store waste military munitions, whichever is later, the owner or operator must notify the department of the location of any waste storage unit used to store waste military munitions for which the conditional exemption in this subdivision is claimed.

(5) The owner or operator must provide oral notice to the department within twenty-four hours from the time the owner or operator becomes aware of any loss or theft of the waste military munitions, or any failure to meet a condition of this subdivision that may endanger health or the environment. In addition, a written submission describing the circumstances shall be provided within five days from the time the owner or operator becomes aware of any loss or theft of the waste military munitions or any failure to meet a condition of this subdivision.

(6) The owner or operator must inventory the waste military munitions at least annually, must inspect the waste military munitions at least quarterly for compliance with the conditions of this subdivision, and must maintain records of the findings of these inventories and inspections for at least three years.

(7) Access to the stored waste military munitions must be limited to appropriately trained and authorized personnel.

b. The conditional exemption in subdivision a from regulation as hazardous waste shall apply only to the storage of nonchemical waste military munitions. It does not

affect the regulatory status of waste military munitions as hazardous wastes with regard to transportation, treatment, or disposal.

c. The conditional exemption in subdivision a applies only so long as all of the conditions in subdivision a are met.

2. Notice of termination of waste storage. The owner or operator must notify the department when a storage unit identified in paragraph 4 of subdivision a of subsection 1 will no longer be used to store waste military munitions.

3. Reinstatement of conditional exemption. If any waste military munition loses its conditional exemption under subdivision a of subsection 1, an application may be filed with the department for reinstatement of the conditional exemption from hazardous waste storage regulation with respect to such munition as soon as the munition is returned to compliance with the conditions of subdivision a of subsection 1. If the department finds that reinstatement of the conditional exemption is appropriate based on factors such as the owner's or operator's provision of a satisfactory explanation of the circumstances of the violation, or a demonstration that the violations are not likely to recur, the department may reinstate the conditional exemption under subdivision a of subsection 1. If the department does not take action on the reinstatement application within sixty days after receipt of the application, then reinstatement shall be deemed granted, retroactive to the date of the application. However, the department may terminate a conditional exemption reinstated by default in the preceding sentence if the department finds that reinstatement is inappropriate based on factors such as the owner's or operator's failure to provide a satisfactory explanation of the circumstances of the violation, or failure to demonstrate that the violations are not likely to recur. In reinstating the conditional exemption under subdivision a of subsection 1, the department may specify additional conditions as are necessary to ensure and document proper storage to protect human health and the environment.

4. Waste chemical munitions.

a. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33.1-24-02 are listed or identified as a hazardous waste and shall be subject to the applicable regulatory requirements of article 33.1-24.

b. Waste military munitions that are chemical agents or chemical munitions and that exhibit a hazardous waste characteristic or are listed as hazardous waste under chapter 33.1-24-02 are not subject to the storage prohibition in section 33.1-24-05-290.

5. Amendments to department of defense explosives safety board storage standards. The department of defense explosives safety board storage standards applicable to waste military munitions, referenced in paragraph 3 of subdivision a of subsection 1, are department of defense 6055.9-STD ("DOD ammunition and explosive safety standards"), in effect on November 8, 1995, except as provided in the following sentence. Any amendments to the department of defense explosives safety board storage standards shall become effective for purposes of subdivision a of subsection 1 on the date the department of defense publishes notice in the federal register that the department of defense explosives safety board standards referenced in subdivision a of subsection 1 have been amended.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-826. Standards applicable to the treatment and disposal of waste military munitions.

The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in article 33.1-24.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-827. [Reserved]

33.1-24-05-828. [Reserved]

33.1-24-05-829. [Reserved]

33.1-24-05-830. [Reserved]

33.1-24-05-831. [Reserved]

33.1-24-05-832. [Reserved]

33.1-24-05-833. [Reserved]

33.1-24-05-834. [Reserved]

33.1-24-05-835. [Reserved]

33.1-24-05-836. [Reserved]

33.1-24-05-837. [Reserved]

33.1-24-05-838. [Reserved]

33.1-24-05-839. [Reserved]

33.1-24-05-840. [Reserved]

33.1-24-05-841. [Reserved]

33.1-24-05-842. [Reserved]

33.1-24-05-843. [Reserved]

33.1-24-05-844. [Reserved]

33.1-24-05-845. [Reserved]

33.1-24-05-846. [Reserved]

33.1-24-05-847. [Reserved]

33.1-24-05-848. [Reserved]

33.1-24-05-849. [Reserved]

33.1-24-05-850. Definitions applicable to the conditional exemption for low-level mixed waste storage, treatment, transportation, and disposal.

For sections 33.1-24-05-850 through 33.1-24-05-929, use the following special definitions:

1. "Agreement state" means a state that has entered into an agreement with the nuclear regulatory commission under subsection 274b of the Atomic Energy Act of 1954, as amended [68 Stat. 919], to assume responsibility for regulating within its borders byproduct, source, or special nuclear material in quantities not sufficient to form a critical mass. North Dakota is an agreement state.
2. "Certified delivery" means certified mail with return receipt requested, or equivalent courier service, or other means, that provides the sender with a receipt confirming delivery.
3. "Eligible naturally occurring or accelerator-produced radioactive material, or both (NARM)" is NARM that is eligible for the transportation and disposal conditional exemption. It is a NARM waste that contains hazardous waste, meets the waste acceptance criteria of, and is allowed by applicable state NARM regulations to be disposed of at a low-level radioactive waste disposal facility licensed in accordance with 10 CFR part 61 or nuclear regulatory commission agreement state equivalent regulations.
4. "Exempted waste" means a waste that meets the eligibility criteria in section 33.1-24-05-856 and meets all of the conditions in section 33.1-24-05-857, or meets the eligibility criteria in section 33.1-24-05-890 and complies with all the conditions in section 33.1-24-05-895. Such waste is conditionally exempted from the regulatory definition of hazardous waste described in section 33.1-24-02-03.
5. "Hazardous waste" means any material which is defined to be hazardous waste in accordance with section 33.1-24-02-03.
6. "Land disposal restriction treatment standards" means treatment standards, under sections 33.1-24-05-250 through 33.1-24-05-299, that a hazardous waste must meet before it can be disposed of in a permitted hazardous waste land disposal unit.
7. "License" means a license issued by the nuclear regulatory commission, or nuclear regulatory commission agreement state, to users that manage radionuclides regulated by nuclear regulatory commission, or nuclear regulatory commission agreement states, under authority of the Atomic Energy Act of 1954, as amended.
8. "Low-level mixed waste" is a waste that contains both low-level radioactive waste and hazardous waste.
9. "Low-level radioactive waste" is a radioactive waste which contains source, special nuclear, or byproduct material, and which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11e.(2) of the Atomic Energy Act. See also nuclear regulatory commission definition of "waste" at 10 CFR 61.2.

10. "Mixed waste" means a waste that contains both hazardous waste and source, special nuclear, or byproduct material subject to the Atomic Energy Act of 1954, as amended.

11. "Naturally occurring radioactive material, accelerator-produced radioactive material, or both (NARM)" means radioactive materials that:

a. Are naturally occurring and are not source, special nuclear, or byproduct materials (as defined by the Atomic Energy Act); or

b. Are produced by an accelerator.

NARM is regulated by the states under state law, or by department of energy (as authorized by the Atomic Energy Act) under department of energy orders.

12. "Nuclear regulatory commission" means the United States nuclear regulatory commission.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-851. [Reserved]

33.1-24-05-852. [Reserved]

33.1-24-05-853. [Reserved]

33.1-24-05-854. [Reserved]

33.1-24-05-855. Storage and treatment conditional exemption and eligibility.

The storage and treatment conditional exemption exempts certain low-level mixed waste from the regulatory definition of hazardous waste in section 33.1-24-02-03 if the waste meets the eligibility criteria in section 33.1-24-05-856 and the generator, treater, or other handler meets the conditions in section 33.1-24-05-857.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-856. Eligible wastes for the storage and treatment conditional exemption.

Low-level mixed waste, defined in section 33.1-24-05-850, is eligible for this conditional exemption if it is generated and managed by a generator, treater, or other handler under a single nuclear regulatory commission or nuclear regulatory commission agreement state license. (Mixed waste generated at a facility with a different license number and shipped to a facility for storage or treatment requires a permit and is ineligible for this exemption. In addition, NARM waste is ineligible for this exemption.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-857. Conditions to qualify for and maintain a storage and treatment exemption.

1. For a generator's, treater's, or other handler's low-level mixed waste to qualify for the exemption, the generator, treater, or other handler must notify the department in writing by certified delivery that the generator, treater, or other handler is claiming a conditional exemption for the low-level mixed waste stored at the facility. The dated notification must include the generator's, treater's, or other handler's name, address, identification number, nuclear regulatory commission or nuclear regulatory commission agreement state license number, the waste code or codes and storage unit or units for which an exemption is being sought, and a statement that the generator, treater, or other handler meets the conditions of sections 33.1-24-05-850 through 33.1-24-05-929. The notification must be signed by an authorized representative who certifies that the information in the notification is true, accurate, and complete. The generator, treater, or other handler must notify the department of the claim either within ninety days of the effective date of this rule, or within ninety days of when a storage unit is first used to store conditionally exempt low-level mixed waste.
2. To qualify for and maintain an exemption for low-level mixed waste, the generator, treater, or other handler must:
 - a. Store low-level mixed waste in tanks or containers in compliance with the requirements of the generator's, treater's, or other handler's license that apply to the proper storage of low-level radioactive waste (not including those license requirements that relate solely to recordkeeping);
 - b. Store low-level mixed waste in tanks or containers in compliance with chemical compatibility requirements of a tank or container in section 33.1-24-05-96, or section 33.1-24-05-112;
 - c. Certify that facility personnel who manage stored conditionally exempt low-level mixed waste are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incidents response that meets the personnel training standards found in subdivision c of subsection 1 of section 33.1-24-05-07;
 - d. Conduct an inventory of the generator's, treater's, or other handler's stored conditionally exempt low-level mixed waste at least annually and inspect it at least quarterly for compliance with sections 33.1-24-05-850 through 33.1-24-05-929; and
 - e. Maintain an accurate emergency plan and provide copies of the plan to all local authorities who may have to respond to a fire, explosion, or release of hazardous waste or hazardous constituents. The plan must describe emergency response arrangements with local authorities; describe evacuation plans; list the names, addresses, and telephone numbers of all facility personnel qualified to work with local authorities as emergency coordinators; and list emergency equipment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-858. [Reserved]

33.1-24-05-859. [Reserved]

33.1-24-05-860. Treatment allowed under storage and treatment conditional exemption.

A generator, treater, or other handler may treat low-level mixed waste at the facility within a tank or container in accordance with the terms of the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license. Treatment that cannot be done in a tank or container without a hazardous waste permit (such as incineration) is not allowed under this exemption.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-861. [Reserved]

33.1-24-05-862. [Reserved]

33.1-24-05-863. [Reserved]

33.1-24-05-864. [Reserved]

33.1-24-05-865. Loss of conditional exemption.

1. A generator's, treater's, or other handler's low-level mixed waste will automatically lose the storage and treatment conditional exemption if the generator, treater, or other handler fails to meet any of the conditions specified in section 33.1-24-05-857. When low-level mixed waste loses the exemption, the generator, treater, or other handler must immediately manage that waste which failed the condition as hazardous waste, and the storage unit storing the low-level mixed waste immediately becomes subject to hazardous waste container or tank storage requirements, as applicable.

a. If a generator, treater, or other handler fails to meet any of the conditions specified in section 33.1-24-05-857 the generator, treater, or other handler must report to the department and the nuclear regulatory commission, or the oversight agency in the nuclear regulatory commission agreement state, in writing by certified delivery within thirty days of learning of the failure. The report must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

(1) The specific condition or conditions the generator, treater, or other handler failed to meet;

(2) A description of the low-level mixed waste (including the waste name, hazardous waste code or codes and quantity) and storage location at the facility; and

(3) The date or dates on which the generator, treater, or other handler failed to meet the condition or conditions.

b. If the failure to meet any of the conditions may endanger human health or the environment, the generator, treater, or other handler must also immediately notify the department orally within twenty-four hours and follow up with a written notification within five days. Failures that may endanger human health or the

environment include discharge of a comprehensive environmental response, compensation and liability act reportable quantity or other leaking or exploding tanks or containers, or detection of radionuclides above background or hazardous constituents in the leachate collection system of a storage area. If the failure may endanger human health or the environment, the generator, treater, or other handler must follow the provisions of the emergency plan.

2. The department may terminate the conditional exemption for the generator's, treater's, or other handler's low-level mixed waste, or require the generator, treater, or other handler to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement or requirements of sections 33.1-24-05-850 through 33.1-24-05-929.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-866. Procedures to reclaim a lost storage and treatment conditional exemption for low-level mixed waste.

1. A generator, treater, or other handler may reclaim the storage and treatment exemption for low-level mixed waste if:
 - a. The generator, treater, or other handler again meets the conditions specified in section 33.1-24-05-857; and
 - b. The generator, treater, or other handler sends the department a notice by certified delivery that the generator, treater, or other handler is reclaiming the exemption for low-level mixed waste. The notice must be signed by an authorized representative certifying that the information contained in the notice is true, complete, and accurate. In the notice the generator, treater, or other handler must do the following:
 - (1) Explain the circumstances of each failure.
 - (2) Certify that the generator, treater, or other handler has corrected each failure that caused the loss of the exemption for the low-level mixed waste and that the generator, treater, or other handler again meets all the conditions as of the date specified in the notice.
 - (3) Describe plans that have been implemented, listing specific steps taken to ensure the conditions will be met in the future.
 - (4) Include any other information the department should consider when reviewing the notice reclaiming the exemption.
2. The department may terminate a reclaimed conditional exemption if the department finds the claim is inappropriate based on factors including the following: failure to correct the problem; unsatisfactory explanation of the circumstances of the failure; or failure to implement a plan with steps to prevent another failure to meet the conditions of section 33.1-24-05-857. In reviewing a reclaimed conditional exemption under this section, the department may add conditions to the exemption to ensure that waste management during storage and treatment of the low-level mixed waste will protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-867. [Reserved]

33.1-24-05-868. [Reserved]

33.1-24-05-869. [Reserved].

33.1-24-05-870. Recordkeeping for the storage and treatment conditional exemption.

1. In addition to those records required by the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license, the generator, treater, or other handler must keep records as follows:
 - a. The generator's, treater's, or other handler's initial notification records, return receipts, reports to the department of failure or failures to meet the exemption conditions, and all records supporting any reclaim of an exemption;
 - b. Records of low-level mixed waste annual inventories, and quarterly inspections;
 - c. Certification that facility personnel who manage stored mixed waste are trained in safe management of low-level mixed waste, including training in chemical waste management and hazardous materials incidents response; and
 - d. The emergency plan as specified in subsection 2 of section 33.1-24-05-857.
2. The generator, treater, or other handler must maintain records concerning notification, personnel trained, and emergency plan for as long as the exemption is claimed and for three years thereafter, or in accordance with nuclear regulatory commission regulations under chapter 33.1-10-04.1 [10 CFR part 20], whichever is longer. The generator, treater, or other handler must maintain records concerning the annual inventory and quarterly inspections for three years after the waste is sent for disposal, or in accordance with nuclear regulatory commission regulations under chapter 33.1-10-04.1 [10 CFR part 20], whichever is longer.
3. The retention period referred to in this section is extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-871. [Reserved]

33.1-24-05-872. [Reserved]

33.1-24-05-873. [Reserved]

33.1-24-05-874. [Reserved]

33.1-24-05-875. Reentry into regulation under the hazardous waste management rules.

Low-level mixed waste is no longer eligible for the storage and treatment conditional exemption:

1. When the low-level mixed waste has met the requirements of the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license for decay-in-storage and can be disposed of as nonradioactive waste, then the conditional exemption for storage no longer applies. On that date the waste is subject to hazardous waste regulation under the applicable sections of article 33.1-24, and the time period for accumulation of a hazardous waste as specified in section 33.1-24-03-12 begins.
2. When a generator's, treater's, or other handler's conditionally exempt low-level mixed waste, which has been generated and stored under a single nuclear regulatory commission or nuclear regulatory commission agreement state license number, is removed from storage, it is no longer eligible for the storage and treatment exemption, however, the waste may be eligible for the transportation and disposal conditional exemption at section 33.1-24-05-885.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-876. [Reserved]

33.1-24-05-877. [Reserved]

33.1-24-05-878. [Reserved]

33.1-24-05-879. [Reserved]

33.1-24-05-880. Storage unit closure.

Interim status and permitted storage units that have been used to store only low-level mixed waste prior to the effective date of sections 33.1-24-05-850 through 33.1-24-05-929 and, after that date, store only low-level mixed waste which becomes exempt under sections 33.1-24-05-850 through 33.1-24-05-929, are not subject to the closure requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 or applicable requirements of subsection 5 of section 33.1-24-06-16. Storage units (or portions of units) that have been used to store both low-level mixed waste and nonmixed hazardous waste prior to the effective date of sections 33.1-24-05-850 through 33.1-24-05-929 or are used to store both after that date remain subject to closure requirements of sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, 33.1-24-05-800 through 33.1-24-05-819, or applicable requirements of subsection 5 of section 33.1-24-06-16 with respect to the nonmixed hazardous waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-881. [Reserved]

33.1-24-05-882. [Reserved]

33.1-24-05-883. [Reserved]

33.1-24-05-884. [Reserved]

33.1-24-05-885. Transportation and disposal conditional exemption.

This conditional exemption exempts a generator's, treater's, or other handler's waste from the regulatory definition of hazardous waste in section 33.1-24-02-03 if the waste meets the eligibility criteria under section 33.1-24-05-890, and the generator, treater, or other handler meets the conditions in section 33.1-24-05-895.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-886. [Reserved]

33.1-24-05-887. [Reserved]

33.1-24-05-888. [Reserved]

33.1-24-05-889. [Reserved]

33.1-24-05-890. Eligibility for the transportation and disposal conditional exemption.

Eligible waste must be:

1. A low-level mixed waste, as defined in section 33.1-24-05-850, that meets the waste acceptance criteria of a low-level radioactive waste disposal facility;
2. An eligible NARM waste, defined in section 33.1-24-05-850; or
3. Both a low-level mixed waste and an eligible NARM waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-891. [Reserved]

33.1-24-05-892. [Reserved]

33.1-24-05-893. [Reserved]

33.1-24-05-894. [Reserved]

33.1-24-05-895. Conditions to qualify for and maintain the transportation and disposal conditional exemption.

A generator, treater, or other handler must meet the following conditions for the generator's, treater's, or other handler's eligible waste to qualify for and maintain the exemption:

1. The eligible waste must meet or be treated to meet land disposal restriction treatment standards as described in section 33.1-24-05-896.

2. If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the waste, the generator, treater, or other handler must manifest and transport the waste according to nuclear regulatory commission regulations as described in section 33.1-24-05-897.
3. The exempted waste must be in containers when it is disposed of in the low-level radioactive waste disposal facility as described in section 33.1-24-05-900.
4. The exempted waste must be disposed of at a designated low-level radioactive waste disposal facility as described in section 33.1-24-05-899.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-896. Treatment standards for eligible waste.

A generator's, treater's, or other handler's low-level mixed waste or eligible NARM waste must meet land disposal restriction treatment standards specified in sections 33.1-24-05-280 through 33.1-24-05-289.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-897. Manifest and transportation of eligible wastes not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations.

If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the generator's, treater's, or other handler's waste, then the generator, treater, or other handler must meet the manifest requirements under chapter 33.1-10-04.1 [10 CFR 20.2006], and the transportation requirements under chapter 33.1-10-13 [10 CFR 1.5] to ship the exempted waste.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-898. Transportation and disposal exemption.

The exemption becomes effective once all the following have occurred:

1. The generator's, treater's, or other handler's eligible waste meets the applicable land disposal restriction treatment standards.
2. The generator, treater, or other handler has received return receipts that the department and the low-level radioactive waste disposal facility have received notification as described in section 33.1-24-05-905.
3. The generator, treater, or other handler has completed the packaging and preparation for shipment requirements for the generator's, treater's, or other handler's waste

according to nuclear regulatory commission packaging and transportation regulations found under chapter 33.1-10-13 [10 CFR part 71]; and the generator, treater, or other handler has prepared a manifest for the waste according to nuclear regulatory commission manifest regulations found under chapter 33.1-10-04.1 [10 CFR part 20].

4. The generator, treater, or other handler has placed the waste on a transportation vehicle destined for a low-level radioactive waste disposal facility licensed by the nuclear regulatory commission or a nuclear regulatory commission agreement state.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-899. Disposal facilities for exempted wastes.

The generator's, treater's, or other handler's exempted waste must be disposed of in a low-level radioactive waste disposal facility that is regulated and licensed by the nuclear regulatory commission under 10 CFR part 61 or by a nuclear regulatory commission agreement state under equivalent state regulations where the low-level radioactive waste disposal facility is located, including state NARM licensing regulations for eligible NARM.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-900. Disposal containers for exempted waste.

The generator's, treater's, or other handler's exempted waste must be placed in containers before it is disposed. The container must be:

1. A carbon steel drum;
2. An alternative container with equivalent containment performance in the disposal environment as a carbon steel drum; or
3. A high integrity container as defined by the nuclear regulatory commission.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-901. [Reserved]

33.1-24-05-902. [Reserved]

33.1-24-05-903. [Reserved]

33.1-24-05-904. [Reserved]

33.1-24-05-905. Notification.

1. The generator, treater, or other handler must provide a one-time notice to the department stating that the generator, treater, or other handler is claiming the transportation and disposal conditional exemption prior to the initial shipment of an exempted waste from

the generator's, treater's, or other handler's facility to a low-level radioactive waste disposal facility. The dated written notice must include the generator, treater, or other handler facility name, address, telephone number, and identification number, and be sent by certified delivery.

2. The generator, treater, or other handler must notify the low-level radioactive waste disposal facility receiving the exempted waste by certified delivery before shipment of each exempted waste. The generator, treater, or other handler can only ship the exempted waste after receipt of the return receipt of the notice to the low-level radioactive waste disposal facility. This notification must include the following:

a. A statement that the generator, treater, or other handler has claimed the exemption for the waste.

b. A statement that the eligible waste meets applicable land disposal restriction treatment standards.

c. The generator, treater, or other handler facility's name, address, and identification number.

d. The hazardous waste code or codes prior to the exemption of the waste streams.

e. A statement that the exempted waste must be placed in a container according to section 33.1-24-05-900 prior to disposal in order for the waste to remain exempt under the transportation and disposal conditional exemption of sections 33.1-24-05-850 through 33.1-24-05-929.

f. The manifest number of the shipment that will contain the exempted waste.

g. A certification that all the information provided is true, complete, and accurate. The statement must be signed by an authorized representative.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-906. [Reserved]

33.1-24-05-907. [Reserved]

33.1-24-05-908. [Reserved]

33.1-24-05-909. [Reserved]

33.1-24-05-910. Recordkeeping for the transportation and disposal conditional exemption.

In addition to those records required by the generator's, treater's, or other handler's nuclear regulatory commission or nuclear regulatory commission agreement state license, the generator, treater, or other handler must keep records as follows:

1. The generator, treater, or other handler must follow the applicable existing recordkeeping requirements under sections 33.1-24-05-40 and 33.1-24-05-256 to demonstrate that the

waste has met land disposal restriction treatment standards prior to claiming the exemption.

2. The generator, treater, or other handler must keep a copy of all notifications and return receipts required under sections 33.1-24-05-915 and 33.1-24-05-916 for three years after the exempted waste is sent for disposal.

3. The generator, treater, or other handler must keep a copy of all notifications and return receipts required under subsection 1 of section 33.1-24-05-905 for three years after the last exempted waste is sent for disposal.

4. The generator, treater, or other handler must keep a copy of the notification and return receipt required under subsection 2 of section 33.1-24-05-905 for three years after the exempted waste is sent for disposal.

5. If the generator, treater, or other handler is not already subject to nuclear regulatory commission or nuclear regulatory commission agreement state equivalent manifest and transportation regulations for the shipment of the waste, the generator, treater, or other handler must also keep all other documents related to tracking the exempted waste as required under chapter 33.1-10-04.1 (10 CFR 20.2006), including applicable NARM requirements, in addition to the records specified in subsections 1 through 4.

6. The retention period referred to in this section is extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-911. [Reserved]

33.1-24-05-912. [Reserved]

33.1-24-05-913. [Reserved]

33.1-24-05-914. [Reserved]

33.1-24-05-915. Loss of transportation and disposal conditional exemption.

1. Any waste will automatically lose the transportation and disposal exemption if the generator, treater, or other handler fails to manage it in accordance with all of the conditions specified in section 33.1-24-05-895.

a. When the generator, treater, or other handler fails to meet any of the conditions specified in section 33.1-24-05-895 for any wastes, the generator, treater, or other handler must report to the department, in writing by certified delivery, within thirty days of learning of the failure. The report must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. This report must include:

(1) The specific condition or conditions that the generator, treater, or other handler failed to meet for the waste;

- (2) A description of the waste (including the waste name, hazardous waste code or codes and quantity) that lost the exemption; and
- (3) The date or dates on which the generator, treater, or other handler failed to meet the condition or conditions for the waste.
- b. If the failure to meet any of the conditions may endanger human health or the environment, the generator, treater, or other handler must also immediately notify the department orally within twenty-four hours and follow up with a written notification within five days.
- 2. The department may terminate the generator's, treater's, or other handler's ability to claim a conditional exemption for the waste, or require the generator, treater, or other handler to meet additional conditions to claim a conditional exemption, for serious or repeated noncompliance with any requirement or requirements of sections 33.1-24-05-850 through 33.1-24-05-929.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-916. Procedures to reclaim a lost transportation and disposal conditional exemption for low-level mixed waste.

- 1. The generator, treater, or other handler may reclaim the transportation and disposal exemption for a waste after the generator, treater, or other handler has received a return receipt confirming that the department has received notification of the loss of the exemption specified in subsection 1 of section 33.1-24-05-915 and if:
 - a. The generator, treater, or other handler again meets the conditions specified in section 33.1-24-05-895 for the waste; and
 - b. The generator, treater, or other handler sends a notice, by certified delivery, to the department that the generator, treater, or other handler is reclaiming the exemption for the waste. The notice must be signed by an authorized representative certifying that the information provided is true, accurate, and complete. The notice must:
 - (1) Explain the circumstances of each failure.
 - (2) Certify that each failure that caused the generator, treater, or other handler to lose the exemption for the waste has been corrected and that the generator, treater, or other handler again meets all conditions for the waste as of the date specified in the notice.
 - (3) Describe plans the generator, treater, or other handler has implemented, listing the specific steps taken, to ensure that conditions will be met in the future.
 - (4) Include any other information the department should consider when reviewing the notice reclaiming the exemption.
- 2. The department may terminate a reclaimed conditional exemption if the department finds that the generator's, treater's, or other handler's claim is inappropriate based on factors including failure to correct the problem; unsatisfactory explanation of the circumstances

of the failure; or failure to implement a plan with steps to prevent another failure to meet the conditions of section 33.1-24-05-895. In reviewing a reclaimed conditional exemption under this section, the department may add conditions to the exemption to ensure that transportation and disposal activities will protect human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-917. [Reserved]

33.1-24-05-918. [Reserved]

33.1-24-05-919. [Reserved]

33.1-24-05-920. [Reserved]

33.1-24-05-921. [Reserved]

33.1-24-05-922. [Reserved]

33.1-24-05-923. [Reserved]

33.1-24-05-924. [Reserved]

33.1-24-05-925. [Reserved]

33.1-24-05-926. [Reserved]

33.1-24-05-927. [Reserved]

33.1-24-05-928. [Reserved]

33.1-24-05-929. [Reserved]

33.1-24-05-930. [Reserved]

33.1-24-05-931. [Reserved]

33.1-24-05-932. [Reserved]

33.1-24-05-933. [Reserved]

33.1-24-05-934. [Reserved]

33.1-24-05-935. [Reserved]

33.1-24-05-936. [Reserved]

33.1-24-05-937. [Reserved]

33.1-24-05-938. [Reserved]

33.1-24-05-939. [Reserved]

33.1-24-05-940. [Reserved]

33.1-24-05-941. [Reserved]

33.1-24-05-942. [Reserved]

33.1-24-05-943. [Reserved]

33.1-24-05-944. [Reserved]

33.1-24-05-945. [Reserved]

33.1-24-05-946. [Reserved]

33.1-24-05-947. [Reserved]

33.1-24-05-948. [Reserved]

33.1-24-05-949. [Reserved]

33.1-24-05-950. Purpose, scope, and applicability of standardized permits.

1. The purpose of sections 33.1-24-05-950 through 33.1-24-05-1149 is to establish minimum standards which define the acceptable management of hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85.
2. Sections 33.1-24-05-950 through 33.1-24-05-1149 applies to owners and operators of facilities who treat or store hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided otherwise in sections 33.1-24-02-01 through 33.1-24-02-07 or subsection 6 of section 33.1-24-05-01.
3. Notwithstanding any other provisions of this part, enforcement actions may be brought pursuant to section 23.1-04-14 of the North Dakota Century Code.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-05-951. Operating status prior to final administrative disposition of the permit application.

If a facility owner or operator has fully complied with the requirements for interim status, as defined in subsection 2 of section 23.1-04-08 of the North Dakota Century Code and regulations under 40 CFR 270.70 as incorporated by reference at subsection 5 of section 33.1-24-06-16, the owner or operator must comply with the applicable provisions of 40 CFR part 265 as incorporated by reference in subsection 5 of section 33.1-24-06-16 instead of the rules in sections 33.1-24-05-950 through 33.1-24-05-1149, until final administrative disposition of the standardized permit application is made, except as provided under sections 33.1-24-05-550 through 33.1-24-05-559.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-952. [Reserved].

33.1-24-05-953. [Reserved].

33.1-24-05-954. [Reserved].

33.1-24-05-955. [Reserved].

33.1-24-05-956. [Reserved].

33.1-24-05-957. [Reserved].

33.1-24-05-958. [Reserved].

33.1-24-05-959. [Reserved].

33.1-24-05-960. General facility standards.

1. Sections 33.1-24-05-960 through 33.1-24-05-979 applies to owners or operators of facilities that treat or store hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950.
2. To comply with sections 33.1-24-05-960 through 33.1-24-05-979, the owner or operator must obtain an identification number, and follow the requirements for waste analysis (section 33.1-24-05-963), security (section 33.1-24-05-964), inspections (section 33.1-24-05-965), training (section 33.1-24-05-966), special waste handling (section 33.1-24-05-067), and location standards (section 33.1-24-05-968).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-961. Identification number.

To comply with sections 33.1-24-05-950 through 33.1-24-05-1149, the facility owner or operator must apply to the department for an identification number.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-05-962. [Reserved].

33.1-24-05-963. General waste analysis.

1. Before an owner or operator treats or stores any hazardous wastes, the owner or operator must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information needed to treat or store the waste to comply with sections 33.1-24-05-950 through 33.1-24-05-1149 and sections 33.1-24-05-250 through 33.1-24-05-299.
 - a. The analysis may include data that was developed under chapter 33.1-24-02, and published or documented data on the hazardous waste or on hazardous waste generated from similar processes.
 - b. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated if the process or operation generating the hazardous wastes has changed.

2. The owner or operator must develop and follow a written waste analysis plan that describes the procedures which the owner or operator will follow to comply with subsection 1. The owner or operator must keep this plan at the facility. If the facility receives wastes generated from offsite, and is eligible for a standardized permit, the owner or operator also must have submitted the waste analysis plan with the notice of intent. At a minimum, the plan must specify all of the following:

a. The hazardous waste parameters that will be analyzed and the rationale for selecting these parameters, for example, how analysis for these parameters will provide sufficient information on the waste's properties to comply with subsection 1;

b. The test methods which will be used to test for these parameters;

c. The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

(1) One of the sampling methods described in appendix I of chapter 33.1-24-02;
or

(2) An equivalent sampling method.

d. The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date; and

e. Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in section 33.1-24-05-08, subsection 4 of section 33.1-24-05-404, subsection 4 of section 33.1-24-05-433, and section 33.1-24-05-453.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-964. Security.

1. The owner or operator must prevent, and minimize the possibility for, livestock and unauthorized people from entering the active portion of the facility.

2. The facility must have:

a. A twenty-four hour surveillance system, for example, television monitoring or surveillance by guards or facility personnel, that continuously monitors and controls entry onto the active portion of the facility; or

b. An artificial or natural barrier, for example, a fence in good repair or a fence combined with a cliff, that completely surrounds the active portion of the facility; and

c. A means to control entry, at all times, through the gates or other entrances to the active portion of the facility, for example, an attendant, television monitors, locked entrance, or controlled roadway access to the facility.

3. The owner or operator must post a sign at each entrance to the active portion of a facility, and at other prominent locations, in sufficient numbers to be seen from any approach to

this active portion. The sign must bear the legend "Danger - Unauthorized Personnel Keep Out". The legend must be in English and in any other language predominant in the area surrounding the facility and must be legible from a distance of at least twenty-five feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-965. General inspection requirements.

1. The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to:
 - a. Release of hazardous waste constituents to the environment; or
 - b. A threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they result in harm to human health or the environment.
2. The owner or operator must develop and follow a written schedule for inspecting, monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
 - a. The owner or operator must keep this schedule at the facility.
 - b. The schedule must identify the equipment and devices that will be inspected and what problems will be looked for, such as malfunctions or deterioration of equipment, for example, inoperative sump pump or leaking fitting.
 - c. The frequency of inspections may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies required in sections 33.1-24-05-1084, 33.1-24-05-1103, 33.1-24-05-1105, 33.1-24-05-1133, 33.1-24-05-403, 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-428, and 33.1-24-05-453 through 33.1-24-05-459, where applicable.
3. The owner or operator must remedy any deterioration or malfunction of equipment or structures that the inspection reveals in time to prevent any environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.
4. The owner or operator must record all inspections in an inspection log or summary. The owner or operator must keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the

inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-966. Personnel training.

1. Facility personnel must successfully complete a program of classroom instruction or on the job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of sections 33.1-24-05-950 through 33.1-24-05-1149. The owner or operator shall ensure that this program includes all the elements described in the documents that are required under subdivision c of subsection 4.
 - a. This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to their employment positions.
 - b. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by including instruction on emergency procedures, emergency equipment, and emergency systems, including all of the following, where applicable:
 - (1) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
 - (2) Key parameters for automatic waste feed cut-off systems;
 - (3) Communications or alarm systems;
 - (4) Response to fires or explosions;
 - (5) Response to ground water contamination incidents; and
 - (6) Shutdown of operations.
2. Facility personnel must successfully complete the program required in subsection 1 within six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of the facility's standardized permit must not work in unsupervised positions until they have completed the training requirements of subsection 1.
3. Facility personnel must take part in an annual review of the initial training required in subsection 1.
4. The owner or operator must maintain the following documents and records at the facility:
 - a. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.

- b. A written job description for each position listed under subdivision a. This description must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position.
 - c. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under subdivision a.
 - d. Records that document that facility personnel have received and completed the training or job experience required under subsections 1, 2, and 3.
5. Training records on current personnel must be kept until the facility closes. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-967. General requirements for ignitable, reactive, or incompatible wastes.

- 1. The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste by following these requirements:
 - a. These wastes must be separated and protected from sources of ignition or reaction such as: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (for example, from heat producing chemical reactions), and radiant heat;
 - b. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flames to specially designated locations; and
 - c. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.
- 2. If the owner or operator treats or stores ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, the owner or operator must take precautions to prevent reactions that:
 - a. Generate extreme heat or pressure, fire or explosions, or violent reactions;
 - b. Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
 - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - d. Damage the structural integrity of the device or facility; and
 - e. Threaten human health or the environment in any similar way.
- 3. The owner or operator must document compliance with subsection 1 or 2. This documentation may be based on references to published scientific or engineering literature, data from trial tests (for example, bench scale or pilot scale tests), waste

analyses (as specified in section 33.1-24-05-963), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-968. Location standards.

The department will not issue or approve a permit to any facility or portion of a facility which is or will be constructed in a location with a geology, hydrogeology, hydrology, or topography which the department reasonably believes is incompatible with the type of hazardous waste management activity occurring or proposed to occur. Locations which are specifically within the meaning of this section include but are not limited to floodplains, ground water recharge areas, highly permeable soils, high ground water tables, and areas of high topographic relief.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-969. [Reserved].

33.1-24-05-970. [Reserved].

33.1-24-05-971. [Reserved].

33.1-24-05-972. [Reserved].

33.1-24-05-973. [Reserved].

33.1-24-05-974. [Reserved].

33.1-24-05-975. [Reserved].

33.1-24-05-976. [Reserved].

33.1-24-05-977. [Reserved].

33.1-24-05-978. [Reserved].

33.1-24-05-979. [Reserved].

33.1-24-05-980. Preparedness and prevention.

Sections 33.1-24-05-980 through 33.1-24-05-989 applies to owners or operators of facilities that treat or store hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-981. General design and operation standards.

The owner or operator must design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-982. Required equipment.

The facility must be equipped with all of the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

1. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;
2. A device, such as a telephone (immediately available at the scene of operations), or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
3. Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
4. Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-983. Testing and maintenance of equipment.

The owner or operator must test and maintain all required facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, as necessary, to assure its proper operation in time of emergency.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-984. Access to communication equipment or alarm system.

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the device is not required under section 33.1-24-05-982.
2. If just one employee is on the premises while the facility is operating, that person must have immediate access to a device, such as a telephone (immediately available at the

scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless not required under section 33.1-24-05-982.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-985. Required aisle space.

The owner or operator must maintain enough aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, as appropriate, considering the type of waste being stored or treated.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-986. Arrangements with local authorities.

1. The owner or operator must attempt to make the following arrangements, as appropriate, for the type of waste handled at the facility and the potential need for the services of these organizations:

a. Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

b. Agreements designating primary emergency authority to a specific police and a specific fire department where more than one police and fire department might respond to an emergency, and agreements with any others to provide support to the primary emergency authority;

c. Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

d. Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses that could result from fires, explosions, or releases at the facility.

2. Where state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-987. [Reserved].

33.1-24-05-988. [Reserved].

33.1-24-05-989. [Reserved].

33.1-24-05-990. Contingency plan and emergency procedures.

Sections 33.1-24-05-990 through 33.1-24-05-1009 applies to owners or operators of facilities that treat or store hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-991. Purpose and implementation of contingency plan.

1. The owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
2. The owner or operator must implement the provisions of the plan immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-992. Content of contingency plan.

1. The contingency plan must:
 - a. Describe the actions facility personnel will take to comply with sections 33.1-24-05-991 and 33.1-24-05-996 in response to fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
 - b. Describe all arrangements agreed upon under section 33.1-24-05-986 by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services.
 - c. List names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see section 33.1-24-05-995), and the owner or operator must keep the list up-to-date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
 - d. Include a current list of all emergency equipment at the facility such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment, where this equipment is required. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
 - e. Include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes, in cases where the primary routes could be blocked by releases of hazardous waste or fires.

2. If the owner or operator has already prepared a spill prevention, control, and countermeasures (SPCC) plan under 40 CFR part 112, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate hazardous waste management provisions that will comply with these requirements.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-993. Copies of contingency plan.

1. The owner or operator must maintain a copy of the plan with all revisions at the facility; and
2. A copy must be submitted, with all revisions, to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-994. Amendment of contingency plan.

The owner or operator must review, and immediately amend the contingency plan, if necessary, whenever:

1. The facility permit is revised;
2. The plan fails in an emergency;
3. The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. The list of emergency coordinators changes; or
5. The list of emergency equipment changes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-995. Emergency coordinator.

At least one employee must be either on the facility premises or on call at all times, for example, available to respond to an emergency by reaching the facility within a short period of time, who has the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-996. Emergency procedures.

1. Whenever there is an imminent or actual emergency situation, the emergency coordinator, or the coordinator's designee when the emergency coordinator is on call, must immediately:

a. Activate internal facility alarm or communication systems, where applicable, to notify all facility personnel; and

b. Notify appropriate state or local agencies with designated response roles if their help is needed.

2. Whenever there is a release, fire, or explosion, the emergency coordinator must:

a. Immediately identify the character, exact source, amount, and areal extent of any released materials. The emergency coordinator may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

b. Assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion. For example, the assessment would consider the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water runoff from water or chemical agents used to control fire and heat induced explosions.

3. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the emergency coordinator must report the coordinator's findings as follows:

a. If the coordinator's assessment indicates that evacuation of local areas may be advisable, the coordinator must immediately notify appropriate local authorities. The coordinator must be available to help appropriate officials decide whether local areas should be evacuated.

b. The coordinator must immediately notify either the government official designated as the on-scene coordinator for that geographical area or the national response center, using their twenty-four hour toll-free number 800-424-8802. The report must include:

(1) Name and telephone number of the reporter;

(2) Name and address of facility;

(3) Time and type of incident, for example, a release or a fire;

(4) Name and quantity of materials involved, to the extent known;

(5) The extent of injuries, if any; and

(6) The possible hazards to human health or the environment outside the facility.

4. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.
5. If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, when appropriate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-997. Procedures after an emergency.

1. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
2. The emergency coordinator must ensure that, in the affected areas of the facility:
 - a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed.
 - b. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-998. Notification and recordkeeping after an emergency.

1. The owner or operator must notify the department and other appropriate state and local authorities, that the facility is in compliance with subsection 2 of section 33.1-24-05-997 before operations are resumed in the affected areas of the facility.
2. The owner or operator must note the time, date, and details of any incident that requires implementing the contingency plan in the operating record. Within fifteen days after the incident, the owner or operator must submit a written report on the incident to the department. The report must include the following:
 - a. The name, address, and telephone number of the owner or operator;
 - b. The name, address, and telephone number of the facility;
 - c. The date, time, and type of incident (for example, fire, explosion);
 - d. The name and quantity of materials involved;
 - e. The extent of injuries, if any;

- f. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- g. The estimated quantity and disposition of recovered material that resulted from the incident.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-999. [Reserved].

33.1-24-05-1000. [Reserved].

33.1-24-05-1001. [Reserved].

33.1-24-05-1002. [Reserved].

33.1-24-05-1003. [Reserved].

33.1-24-05-1004. [Reserved].

33.1-24-05-1005. [Reserved].

33.1-24-05-1006. [Reserved].

33.1-24-05-1007. [Reserved].

33.1-24-05-1008. [Reserved].

33.1-24-05-1009. [Reserved].

33.1-24-05-1010. Recordkeeping, reporting, and notifying.

Sections 33.1-24-05-1010 through 33.1-24-05-1019 applies to owners or operators of facilities that store or nonthermally treat hazardous waste under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950. In addition, the owner or operator must comply with the manifest requirements of chapter 33.1-24-03 whenever a shipment of hazardous waste is initiated from the facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1011. Use of manifest system.

- 1. If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or the owner's or operator's agent, must:
 - a. Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
 - b. Note any significant discrepancies in the manifest, as defined in subsection 1 of section 33.1-24-05-1012, on each copy of the manifest;

- c. Immediately give the transporter at least one copy of the signed manifest;
 - d. Within thirty days after the delivery, send a copy of the manifest to the generator; and
 - e. Retain at the facility a copy of each manifest for at least three years from the date of delivery.
2. If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the identification numbers, generator's certification, and signatures), the owner or operator, or the owner's or operator's agent, must:
- a. Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received.
 - b. Note any significant discrepancies, as defined in subsection 1 of section 33.1-24-05-1012, in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper. Note that the department does not intend that the owner or operator of a facility whose procedures under subsection 2 of section 33.1-24-05-963 include waste analysis must perform that analysis before signing the shipping paper and giving it to the transporter. Subsection 2 of section 33.1-24-05-1012, however, requires reporting an unreconciled discrepancy discovered during later analysis.
 - c. Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received).
 - d. Within thirty days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within thirty days after delivery, the owner or operator, or the owner's or operator's agent, must send a copy of the shipping paper signed and dated to the generator. Note that subsection 3 of section 33.1-24-03-07 requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).
 - e. Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.
3. Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of chapter 33.1-24-03. The department notes that the provisions of section 33.1-24-03-12 are applicable to the onsite accumulation of hazardous wastes by generators. Therefore, the provisions of section 33.1-24-03-12 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.
4. Within three working days of the receipt of a shipment subject to sections 33.1-24-03-50 through 33.1-24-03-59, the owner or operator of the facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the department, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, D.C. 20460, and to competent

authorities of all other concerned countries. The original copy of the tracking document must be maintained at the facility for at least three years from the date of signature.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1012. Manifest discrepancies.

1. Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are:
 - a. For bulk waste, variations greater than ten percent in weight; and
 - b. For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.
2. Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (for example, with telephone conversations). If the discrepancy is not resolved within fifteen days after receiving the waste, the owner or operator must immediately submit to the department a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1013. Operating record.

1. The owner or operator must keep a written operating record at the facility.
2. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:
 - a. A description and the quantity of each type of hazardous waste generated, and the methods and dates of its storage or treatment or both at the facility as required by appendix I of chapter 33.1-24-05;
 - b. The location of each hazardous waste within the facility and the quantity at each location;
 - c. Records and results of waste analyses and waste determinations performed as specified in sections 33.1-24-05-963, 33.1-24-05-967, 33.1-24-05-404, 33.1-24-05-433, 33.1-24-05-453, and 33.1-24-05-256;
 - d. Summary reports and details of all incidents that require the owner or operator to implement the contingency plan as specified in subsection 2 of section 33.1-24-05-998;

- e. Records and results of inspections as required by subsection 4 of section 33.1-24-05-965 (except the owner or operator needs to keep this data for only three years);
- f. Monitoring, testing or analytical data, and corrective action when required by sections 33.1-24-05-1020 through 33.1-24-05-1039 and sections 33.1-24-05-1101, 33.1-24-05-1103, 33.1-24-05-1105, and subsections 3 through 6 of section 33.1-24-05-404, 33.1-24-05-405, subsections 4 through 9 of section 33.1-24-05-433, 33.1-24-05-434, 33.1-24-05-458, 33.1-24-05-459, and 33.1-24-05-460;
- g. All closure cost estimates under section 33.1-24-05-1062;
- h. A certification, at least annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that is generated to the degree determined to be economically practicable; and that the proposed method of treatment or storage is that practicable method currently available to the permittee that minimizes the present and future threat to human health and the environment;
- i. For an onsite treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration, if applicable, required by the permittee under section 33.1-24-05-256;
- j. For an onsite storage facility, the information in the notice (except the manifest number), and the certification and demonstration, if applicable, required by the permittee under section 33.1-24-05-256;
- k. For an offsite treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256; and
- l. For an offsite storage facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under section 33.1-24-05-256.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1014. Availability, retention, and disposition of records.

1. All records, including plans, required under sections 33.1-24-05-950 through 33.1-24-05-1149 must be furnished upon request, and made available at all reasonable times for inspection, by a duly designated officer, employee, or representative of the department.
2. The retention period for all records required under sections 33.1-24-05-950 through 33.1-24-05-1149 is extended automatically during the course of any unresolved enforcement action involving the facility or as requested by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-12; S.L. 2017, ch. 199, § 19

33.1-24-05-1015. Reports.

The owner or operator must prepare and submit a biennial report and other reports listed in subsection 2.

1. Biennial report. The owner or operator must prepare and submit a single copy of a biennial report to the department by March 1 of each even numbered year. The biennial report form and instructions can be obtained from the department's division of waste management. The report must cover facility activities during the previous calendar year and must include:
 - a. The identification number, name, and address of the facility;
 - b. The calendar year covered by the report;
 - c. The method of treatment or storage for each hazardous waste;
 - d. The most recent closure cost estimate under section 33.1-24-05-1062;
 - e. A description of the efforts undertaken during the year to reduce the volume and toxicity of generated waste;
 - f. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984; and
 - g. The certification signed by the owner or operator.
2. Additional reports. In addition to submitting the biennial reports, the owner or operator must also report to the department:
 - a. Releases, fires, and explosions as specified in subsection 2 of section 33.1-24-05-998;
 - b. Facility closures specified in section 33.1-24-05-1047; and
 - c. As otherwise required by sections 33.1-24-05-1080 through 33.1-24-05-1099, 33.1-24-05-1100 through 33.1-24-05-1129, 33.1-24-05-1130 through 33.1-24-05-1149, and 33.1-24-05-400 through 33.1-24-05-474.
3. For offsite facilities, the identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator.
4. A description and the quantity of each hazardous waste the facility received during the year. For offsite facilities, this information must be listed by identification number of each generator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1016. Transfer of ownership.

Before transferring ownership or operation of a facility during its operating life, the permittee must notify the new owner or operator in writing of the requirements of sections 33.1-24-05-950 through 33.1-24-05-1149 and sections 33.1-24-06-45 through 33.1-24-06-85.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1017. [Reserved].

33.1-24-05-1018. [Reserved].

33.1-24-05-1019. [Reserved].

33.1-24-05-1020. Releases from solid waste management units.

Sections 33.1-24-05-1020 through 33.1-24-05-1039 applies to the owner or operator of a facility that treats or stores hazardous waste and is regulated under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950, or unless the facility already has a permit that imposes requirements for corrective action under section 33.1-24-05-58.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1021. [Reserved].

33.1-24-05-1022. [Reserved].

33.1-24-05-1023. [Reserved].

33.1-24-05-1024. [Reserved].

33.1-24-05-1025. [Reserved].

33.1-24-05-1026. [Reserved].

33.1-24-05-1027. [Reserved].

33.1-24-05-1028. [Reserved].

33.1-24-05-1029. [Reserved].

33.1-24-05-1030. [Reserved].

33.1-24-05-1031. Corrective action for solid waste management units.

1. The owner or operator must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

2. The department will specify corrective action in the supplemental portion of the standardized permit in accordance with this section and sections 33.1-24-05-550 through 33.1-24-05-559. The department will include in the supplemental portion of the standardized permit schedules of compliance for corrective action (where corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing corrective action.
3. The owner or operator must implement corrective action beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the department that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner or operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied. Onsite measures to address such releases will be determined on a case-by-case basis. The owner or operator must provide assurances of financial responsibility for such corrective action.
4. The owner or operator does not have to comply with this section if the owner or operator are the owner or operator of a remediation waste site unless the owner's or operator's site is part of a facility that is subject to a permit for treating, storing, or disposing of hazardous wastes that are not remediation wastes.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-13; S.L. 2017, ch. 199, § 19

33.1-24-05-1032. [Reserved].

33.1-24-05-1033. [Reserved].

33.1-24-05-1034. [Reserved].

33.1-24-05-1035. [Reserved].

33.1-24-05-1036. [Reserved].

33.1-24-05-1037. [Reserved].

33.1-24-05-1038. [Reserved].

33.1-24-05-1039. [Reserved].

33.1-24-05-1040. Applicability of closure requirements.

Sections 33.1-24-05-1040 through 33.1-24-05-1059 applies to the owner or operator of a facility that treats or stores hazardous waste and is regulated under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1041. Closure performance standard.

The owner or operator shall close the storage and treatment units in a manner that:

1. Minimizes the need for further maintenance;
2. Controls, minimizes, or eliminates, to the extent necessary to protect human health and the environment, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
3. Meets the closure requirements of sections 33.1-24-05-1040 through 33.1-24-05-1059 and the requirements of sections 33.1-24-05-1086, 33.1-24-05-1111, and 33.1-24-05-1138. If the owner or operator determines that, when applicable, the closure requirements of section 33.1-24-05-1111 (tanks) or section 33.1-24-05-1138 (containment buildings) cannot be met, then the owner or operator must close the unit in accordance with the requirements that apply to landfills (section 33.1-24-05-180). In addition, for the purposes of postclosure and financial responsibility, such a tank system or containment building is then considered to be a landfill, and the owner or operator must apply for a postclosure care permit in accordance with chapter 33.1-24-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1042. Closure plan.

1. To close the facility, the owner or operator must follow an approved closure plan, and follow notification requirements.
 - a. The closure plan must be submitted with the notice of intent to operate under a standardized permit. Final issuance of the standardized permit constitutes approval of the closure plan, and the plan becomes a condition of the hazardous waste standardized permit.
 - b. The department's approval of the plan must ensure that the approved plan is consistent with sections 33.1-24-05-1041 through 33.1-24-05-1045, 33.1-24-05-1086, 33.1-24-05-1111, and 33.1-24-05-1138.
2. Satisfy the requirements for content of a closure plan. The closure plan must identify steps necessary to perform partial or final, or both, closure of the facility. The closure plan must include, at least:
 - a. A description of how each hazardous waste management unit at the facility subject to sections 33.1-24-05-1040 through 33.1-24-05-1059 will be closed in accordance with section 33.1-24-05-1041.
 - b. A description of how final closure of the facility will be conducted in accordance with section 33.1-24-05-1041. The description must identify the maximum extent of the operations which will be unclosed during the active life of the facility.
 - c. An estimate of the maximum inventory of hazardous wastes ever onsite during the active life of the facility and a detailed description of the methods to be used during partial or final, or both, closure, such as methods for removing, transporting,

treating, storing, or disposing of all hazardous wastes, and identification of the types of offsite hazardous waste management units to be used, if applicable.

d. A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial or final closure. These might include procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard.

e. A detailed description of other activities necessary during the closure period to ensure that partial or final closure satisfies the closure performance standards.

f. A schedule for closure of each hazardous waste management unit, and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities that allow tracking of progress of partial or final closure.

g. For facilities that use trust funds to establish financial assurance under section 33.1-24-05-1063 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.

3. The owner or operator may submit a written notification to the department for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility, following the applicable procedures in section 33.1-24-07-51.

a. Events leading to a change in the closure plan, and requiring a modification, may include:

(1) A change in the operating plan or facility design;

(2) A change in the expected year of closure, if applicable; or

(3) In conducting partial or final closure activities, an unexpected event requiring a modification of the approved closure plan.

b. The written notification or request must include a copy of the amended closure plan for review or approval by the department. The department will approve, disapprove, or modify this amended plan in accordance with the procedures in sections 33.1-24-07-51 and 33.1-24-06-85.

4. Notification before final closure.

a. The owner or operator must notify the department in writing at least forty-five days before the date that the owner or operator expects to begin final closure of a treatment or storage tank, container storage area, or containment building.

b. The date when the owner or operator expects to begin closure must be no later than thirty days after the date that any hazardous waste management unit receives the known final volume of hazardous wastes.

c. If the facility's permit is terminated, or if the facility is otherwise ordered, by judicial decree or final order under North Dakota Century Code section 23.1-04-14, to

cease receiving hazardous wastes or to close, then the requirements of this subsection do not apply. However, the owner or operator must close the facility following the deadlines established in section 33.1-24-05-1045.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1043. Public comment on the closure plan.

1. The department will provide the owner or operator and the public, when the draft standardized permit is public noticed, the opportunity to submit written comments on the plan and to the draft permit as allowed by section 33.1-24-07-48. The department will also, in response to a request or at the department's own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the closure plan, and the permit.
2. The department will give public notice of the hearing thirty days before it occurs. Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1044. [Reserved].

33.1-24-05-1045. Closure - Time allowed for closure.

1. Within ninety days after the final volume of hazardous waste is sent to a unit, the owner or operator must treat or remove from the unit all hazardous wastes following the approved closure plan.
2. The owner or operator must complete final closure activities in accordance with the approved closure plan within one hundred eighty days after the final volume of hazardous wastes is sent to the unit. The department may approve an extension of one hundred eighty days to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:
 - a. The final closure activities will take longer than one hundred eighty days to complete due to circumstances beyond the owner's or operator's control, excluding ground water contamination;
 - b. The owner or operator has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed, but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements; and
 - c. The demonstration must be made at least thirty days prior to the expiration of the initial one hundred eighty-day period.

3. Nothing in this section precludes the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved final closure plan at any time before or after notification of final closure.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1046. Disposal or decontamination of equipment, structures, and soils.

The owner or operator must properly dispose of or decontaminate all contaminated equipment, structures, and soils during the partial and final closure periods. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste following all applicable requirements of chapter 33.1-24-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1047. Certification of closure.

Within sixty days of the completion of final closure of each unit under sections 33.1-24-06-45 through 33.1-24-06-85, the owner or operator must submit to the department, by registered mail, a certification that each hazardous waste management unit or facility, as applicable, has been closed following the specifications in the closure plan. Both the owner or operator and a qualified professional engineer must sign the certification. Documentation supporting the qualified professional engineer's certification must be furnished to the department upon request until the department releases the owner or operator from the financial assurance requirements for closure under subsection 10 of section 33.1-24-05-1063.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1048. [Reserved].

33.1-24-05-1049. [Reserved].

33.1-24-05-1050. [Reserved].

33.1-24-05-1051. [Reserved].

33.1-24-05-1052. [Reserved].

33.1-24-05-1053. [Reserved].

33.1-24-05-1054. [Reserved].

33.1-24-05-1055. [Reserved].

33.1-24-05-1056. [Reserved].

33.1-24-05-1057. [Reserved].

33.1-24-05-1058. [Reserved].

33.1-24-05-1059. [Reserved].

33.1-24-05-1060. Applicability of financial requirements.

1. The requirements of sections 33.1-24-05-1060 through 33.1-24-05-1079 apply to owners and operators who treat or store hazardous waste under a standardized permit, except as provided in subsection 2 of section 33.1-24-05-950 or subsection 4.
2. The owner or operator must:
 - a. Prepare a closure cost estimate as required in section 33.1-24-05-1062;
 - b. Demonstrate financial assurance for closure as required in section 33.1-24-05-1063; and
 - c. Demonstrate financial assurance for liability as required in section 33.1-24-05-1067.
3. The owner or operator must notify the department if the owner or operator is named as a debtor in a bankruptcy proceeding under title 11 (bankruptcy), United States Code (see also section 33.1-24-05-1068).
4. States and the federal government are exempt from the requirements of sections 33.1-24-05-1060 through 33.1-24-05-1079.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1061. Definitions of terms.

1. "Closure plan" means the plan for closure prepared in accordance with the requirements of section 33.1-24-05-1042.
2. "Current closure cost estimate" means the most recent of the estimates prepared in accordance with subsections 1, 2, and 3 of section 33.1-24-05-1062.
3. [Reserved]
4. "Parent corporation" means a corporation which directly owns at least fifty percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.
5. [Reserved]
6. The following terms are used in the specifications for the financial tests for closure and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices:
 - a. "Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

- b. "Current plugging and abandonment cost estimate" means the most recent of the estimates prepared in accordance with 40 CFR section 144.62(a), (b), and (c).
 - c. "Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.
 - d. "Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.
 - e. "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.
7. In the liability insurance requirements, the terms "bodily injury and property damage" shall have the meanings given these terms by applicable North Dakota state law. However, these terms do not include those liabilities which, consistent with standard industry practices, are excluded from coverage in liability policies for bodily injury and property damage. The department intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.
- a. "Accidental occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.
 - b. "Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.
 - c. "Sudden accidental occurrence" means an occurrence which is not continuous or repeated in nature.
8. "Substantial business relationship" means the extent of a business relationship necessary under applicable North Dakota state law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1062. Cost estimates for closure.

1. The owner or operator must have at the facility a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in sections 33.1-24-05-1041 through 33.1-24-05-1045 and applicable closure requirements in sections 33.1-24-05-1086, 33.1-24-05-1111, and 33.1-24-05-1138.

- a. The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by the closure plan (see subsection 2 of section 33.1-24-05-1042).
 - b. The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator (see definition of parent corporation in subsection 4 of section 33.1-24-05-1061). The owner or operator may use costs for onsite disposal if the owner or operator can demonstrate that onsite disposal capacity will exist at all times over the life of the facility.
 - c. The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, or nonhazardous wastes, facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.
 - d. The owner or operator may not incorporate a zero cost for hazardous wastes, or nonhazardous wastes that might have economic value.
2. During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation within sixty days prior to the anniversary date of the establishment of the financial instruments used to comply with section 33.1-24-05-1063. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within thirty days after the close of the firm's fiscal year and before submission of updated information to the department as specified in paragraph 3 of subdivision b of subsection 6 of section 33.1-24-05-1063. The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent implicit price deflator for gross domestic product published by the United States department of commerce in its survey of current business, as specified in subdivisions a and b. The inflation factor is the result of dividing the latest published annual deflator by the deflator for the previous year.
 - a. The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.
 - b. Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.
 3. During the active life of the facility, the owner or operator must revise the closure cost estimate no later than thirty days after the department has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in subsection 2.
 4. The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with subsections 1 and 3 and, when this estimate has been adjusted in accordance with subsection 2, the latest adjusted closure cost estimate.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1063. Financial assurance for closure.

The owner or operator must establish financial assurance for closure of each storage or treatment unit that the owner or operator owns or operates. In establishing financial assurance for closure, the owner or operator must choose from the financial assurance mechanisms in subsections 1 through 7. The owner or operator can also use a combination of mechanisms for a single facility if the owner or operator meets the requirements in subsection 8, or may use a single mechanism for multiple facilities as in subsection 9. The department will release the owner or operator from the requirements of this section after the owner or operator meets the criteria under subsection 10.

1. Closure Trust Fund. Owners and operators can use the "closure trust fund" that is specified in subdivisions a and b of subsection 1 of section 33.1-24-05-77, and subdivisions f, g, h, i, k, and l of subsection 1 of section 33.1-24-05-77. For purposes of this subsection, the following provisions also apply:

a. Payments into the trust fund for a new facility must be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan, or over three years, whichever period is shorter. This period of time is hereafter referred to as the "pay-in period".

b. For a new facility, the first payment into the closure trust fund must be made before the facility may accept the initial storage. A receipt from the trustee must be submitted by the owner or operator to the department before this initial storage of waste. The first payment must be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period, except as provided in subsection 8 for multiple mechanisms. Subsequent payments must be made no later than thirty days after each anniversary date of the first payment. The owner or operator determines the amount of each subsequent payment by subtracting the current value of the trust fund from the current closure cost estimate, and dividing this difference by the number of years remaining in the pay-in period. Mathematically, the formula is:

Next payment = (current closure estimate - current value of the trust fund) divided by years remaining in the pay-in period.

c. The owner or operator of a facility existing on the effective date of this subsection can establish a trust fund to meet this subsection's financial assurance requirements. If the value of the trust fund is less than the current closure cost estimate when a final approval of the permit is granted for the facility, the owner or operator must pay the difference into the trust fund within sixty days.

d. The owner or operator may accelerate payments into the trust fund or deposit the full amount of the closure cost estimate when establishing the trust fund. However, the owner or operator must maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in subdivision b or c.

e. The owner or operator must submit a trust agreement with the wording specified in subdivision a of subsection 1 of section 33.1-24-05-81.

2. Surety bond guaranteeing payment into a closure trust fund. Owners and operators can use the "surety bond guaranteeing payment into a closure trust fund", as specified in

subsection 2 of section 33.1-24-05-77, including the use of the surety bond instrument specified at subsection 2 of section 33.1-24-05-81, and the standby trust specified at subdivision c of subsection 2 of section 33.1-24-05-77.

3. Surety bond guaranteeing performance of closure. Owners and operators can use the "surety bond guaranteeing performance of closure", as specified in subsection 3 of section 33.1-24-05-77, the submission and use of the surety bond instrument specified at subsection 3 of section 33.1-24-05-81, and the standby trust specified at subdivision c of subsection 3 of section 33.1-24-05-77.

4. Closure letter of credit. Owners and operators can use the "closure letter of credit" specified in subsection 4 of section 33.1-24-05-77, the submission and use of the irrevocable letter of credit instrument specified in subsection 4 of section 33.1-24-05-81, and the standby trust specified in subdivision c of subsection 4 of section 33.1-24-05-77.

5. Closure insurance. Owners and operators can use "closure insurance", as specified in subsection 5 of section 33.1-24-05-77, utilizing the certificate of insurance for closure specified at subsection 5 of section 33.1-24-05-81.

6. Corporate financial test. An owner or operator that satisfies the requirements of this subsection may demonstrate financial assurance up to the amount specified in this subsection:

a. Financial component.

(1) The owner or operator must satisfy one of the following three conditions:

(a) A current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;

(b) A ratio of less than one and five-tenths comparing total liabilities to net worth; or

(c) A ratio of greater than one-tenth comparing the sum of net income plus depreciation, depletion and amortization, minus ten million dollars, to total liabilities.

(2) The tangible net worth of the owner or operator must be greater than:

(a) The sum of the current environmental obligations (see item 1 of subparagraph a of paragraph 1 of subdivision b), including guarantees, covered by a financial test plus ten million dollars, except as provided in subparagraph b.

(b) Ten million dollars in tangible net worth plus the amount of any guarantees that have not been recognized as liabilities on the financial statements provided all of the environmental obligations (see item 1 of subparagraph a of paragraph 1 of subdivision b) covered by a financial test are recognized as liabilities on the owner's or operator's audited financial statements, and subject to the approval of the department.

(3) The owner or operator must have assets located in the United States amounting to at least the sum of environmental obligations covered by a

financial test as described in item 1 of subparagraph a of paragraph 1 of subdivision b.

b. Recordkeeping and reporting requirements.

(1) The owner or operator must submit the following items to the department:

(a) A letter signed by the owner's or operator's chief financial officer that:

[1] Lists all the applicable current types, amounts, and sums of environmental obligations covered by a financial test. These obligations include both obligations in the programs which the environmental protection agency directly operates and obligations where the environmental protection agency has delegated authority to the state or approved the state's program. These obligations include, but are not limited to:

[a] Liability, closure, postclosure and corrective action cost estimates required for hazardous waste treatment, storage, and disposal facilities under sections 33.1-24-05-58, 33.1-24-05-76, 33.1-24-05-79, and subsection 5 of section 33.1-24-06-16;

[b] Cost estimates required for municipal solid waste management facilities under sections 33.1-20-14-02, 33.1-20-14-03, 33.1-20-14-04, and 33.1-20-14-05;

[c] Current plugging cost estimates required for underground injection control facilities under subdivision d of subsection 1 of section 33.1-25-01-06;

[d] Cost estimates required for petroleum underground storage tank facilities under section 33.1-24-08-83;

[e] Cost estimates required for polychlorinated biphenyl storage facilities under 40 CFR section 761.65;

[f] Any financial assurance required under, or as part of an action undertaken under, the comprehensive environmental response, compensation, and liability act; and

[g] Any other environmental obligations that are assured through a financial test.

[2] Provides evidence demonstrating that the firm meets the conditions of either subparagraph a or b or c of paragraph 1 of subdivision a and paragraphs 2 and 3 of subdivision a.

(b) A copy of the independent certified public accountant's unqualified opinion of the owner's or operator's financial statements for the latest completed fiscal year. To be eligible to use the financial test, the owner's or operator's financial statements must receive an unqualified opinion from the independent certified public accountant. An adverse opinion, disclaimer of opinion, or other qualified opinion will be cause for

disallowance, with the potential exception for qualified opinions provided in the next sentence. The department may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the department deems that the matters which form the basis for the qualification are insufficient to warrant disallowance of the test. If the department does not allow use of the test, the owner or operator must provide alternate financial assurance that meets the requirements of this section within thirty days after the notification of disallowance.

(c) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies subparagraph b or c of paragraph 1 of subdivision a that are different from data in the audited financial statements referred to in subparagraph b or any other audited financial statement or data filed with the securities and exchange commission, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based upon an agreed upon procedures engagement in accordance with professional auditing standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of that comparison, and the reasons for any differences.

(d) If the chief financial officer's letter provides a demonstration that the firm has assured for environmental obligations as provided in subparagraph b of paragraph 2 of subdivision a, then the letter shall include a report from the independent certified public accountant that verifies that all of the environmental obligations covered by a financial test have been recognized as liabilities on the audited financial statements, how these obligations have been measured and reported, and that the tangible net worth of the firm is at least ten million dollars plus the amount of any guarantees provided.

(2) The owner or operator of a new facility must submit the items specified in paragraph 1 to the department at least sixty days before placing waste in the facility.

(3) After the initial submission of items specified in paragraph 1, the owner or operator must send updated information to the department within ninety days following the close of the owner or operator's fiscal year. The department may provide up to an additional forty-five days for an owner or operator who can demonstrate that ninety days is insufficient time to acquire audited financial statements. The updated information must consist of all items specified in paragraph 1.

(4) The owner or operator is no longer required to submit the items specified in this subdivision or comply with the requirements of this subsection when:

(a) The owner or operator substitutes alternate financial assurance as specified in this section that is not subject to these recordkeeping and reporting requirements; or

(b) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 10.

(5) An owner or operator who no longer meets the requirements of subdivision a cannot use the financial test to demonstrate financial assurance. Instead an owner or operator who no longer meets the requirements of subdivision a, must:

(a) Send notice to the department of intent to establish alternate financial assurance as specified in this section. The owner or operator must send this notice by certified mail within ninety days following the close of the owner's or operator's fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements of this subsection.

(b) Provide alternative financial assurance within one hundred twenty days after the end of such fiscal year.

(6) The department may, based on a reasonable belief that the owner or operator may no longer meet the requirements of subdivision a, require at any time the owner or operator to provide reports of its financial condition in addition to or including current financial test documentation as specified in subdivision b. If the department finds that the owner or operator no longer meets the requirements of subdivision a, the owner or operator must provide alternate financial assurance that meets the requirements of this section.

7. Corporate Guarantee.

a. An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in subsection 6 and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording in subsection 8 of section 33.1-24-05-81. The certified copy of the guarantee must accompany the letter from the guarantor's chief financial officer and accountants' opinions. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter from the guarantor's chief financial officer must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

b. For a new facility, the guarantee must be effective and the guarantor must submit the items in subdivision a and the items specified in paragraph 1 of subdivision b of subsection 6 to the department at least sixty days before the owner or operator places waste in the facility.

c. The terms of the guarantee must provide that:

(1) If the owner or operator fails to perform closure at a facility covered by the guarantee, the guarantor will:

- (a) Perform, or pay a third party to perform closure (performance guarantee);
or
- (b) Establish a fully funded trust fund as specified in subsection 1 in the name of the owner or operator (payment guarantee).
- (2) The guarantee will remain in force for as long as the owner or operator must comply with the applicable financial assurance requirements of this subpart unless the guarantor sends prior notice of cancellation by certified mail to the owner or operator and to the department. Cancellation may not occur, however, during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the department as evidenced by the return receipts.
- (3) If notice of cancellation is given, the owner or operator must, within ninety days following receipt of the cancellation notice by the owner or operator and the department, obtain alternate financial assurance, and submit documentation for that alternate financial assurance to the department. If the owner or operator fails to provide alternate financial assurance and obtain the written approval of such alternative assurance from the department within the ninety-day period, the guarantor must provide that alternate assurance in the name of the owner or operator and submit the necessary documentation for the alternative assurance to the department within one hundred twenty days of the cancellation notice.
- d. If a corporate guarantor no longer meets the requirements of subdivision a of subsection 6, the owner or operator must, within ninety days, obtain alternative assurance, and submit the assurance to the department for approval. If the owner or operator fails to provide alternate financial assurance within the ninety-day period, the guarantor must provide that alternate assurance within the next thirty days, and submit it to the department for approval.
- e. The guarantor is no longer required to meet the requirements of this subsection when:
- (1) The owner or operator substitutes alternate financial assurance as specified in this section; or
- (2) The owner or operator is released from the requirements of this subsection in accordance with subsection 10.
8. Use of Multiple Financial Mechanisms. An owner or operator may use more than one mechanism at a particular facility to satisfy the requirements of this section. The acceptable mechanisms are trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, insurance, the financial test, and the guarantee, except owners or operators cannot combine the financial test with the guarantee. The mechanisms must be as specified in subsections 1, 2, 4, 5, 6, and 7, respectively, except it is the combination of mechanisms rather than a single mechanism that must provide assurance for an amount at least equal to the cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, the owner or operator may use the trust fund as the standby trust for the other mechanisms. A single trust fund

can be established for two or more mechanisms. The department may use any or all of the mechanisms to provide for closure of the facility.

9. Use of a financial mechanism for multiple facilities. An owner or operator may use a financial mechanism for multiple facilities, as specified in subsection 8 of section 33.1-24-05-77.

10. Release of the owner or operator from the requirements of this section. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the department will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain financial assurance for final closure of the facility, unless the department has reason to believe that final closure has not been completed in accordance with the approved closure plan. The department shall provide the owner or operator with a detailed written statement of any such reasons to believe that closure has not been conducted in accordance with the approved closure plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1064. [Reserved].

33.1-24-05-1065. [Reserved].

33.1-24-05-1066. [Reserved].

33.1-24-05-1067. Liability requirements.

1. Coverage for sudden accidental occurrences. An owner or operator of a hazardous waste treatment or storage facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least one million dollars per occurrence with an annual aggregate of at least two million dollars, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in subdivisions a through g:

a. Trust fund for liability coverage. An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in subsection 10 of section 33.1-24-05-79.

b. Surety bond for liability coverage. An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in subsection 9 of section 33.1-24-05-79.

c. Letter of credit for liability coverage. An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in subsection 8 of section 33.1-24-05-79.

d. Insurance for liability coverage. An owner or operator may meet the requirements of this section by obtaining liability insurance as specified in subdivision a of subsection 1 of section 33.1-24-05-79.

- e. Financial test for liability coverage. An owner or operator may meet the requirements of this section by passing a financial test as specified in subsection 6.
- f. Guarantee for liability coverage. An owner or operator may meet the requirements of this section by obtaining a guarantee as specified in subsection 7.
- g. Combination of mechanisms. An owner or operator may demonstrate the required liability coverage through the use of combinations of mechanisms as allowed by subdivision f of subsection 1 of section 33.1-24-05-79.
- h. An owner or operator shall notify the department in writing within thirty days whenever:
 - (1) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in subdivisions a through g;
 - (2) A certification of valid claim for bodily injury or property damages caused by a sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under subdivisions a through g; or
 - (3) A final court order establishing a judgment for bodily injury or property damage caused by a sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under subdivisions a through g.
- 2. [Reserved]
- 3. [Reserved]
- 4. [Reserved]
- 5. Period of coverage. Within sixty days after receiving certifications from the owner or operator and a qualified professional engineer that final closure has been completed in accordance with the approved closure plan, the department will notify the owner or operator in writing that the owner or operator is no longer required by this section to maintain liability coverage from that facility, unless the department has reason to believe that closure has not been in accordance with the approved closure plan.
- 6. Financial test for liability coverage. An owner or operator that satisfies the requirements of this subsection may demonstrate financial assurance for liability up to the amount specified in this subsection:
 - a. Financial component.
 - (1) If using the financial test for only liability coverage, the owner or operator must have tangible net worth greater than the sum of the liability coverage to be demonstrated by this test plus ten million dollars.
 - (2) The owner or operator must have assets located in the United States amounting to at least the amount of liability covered by this financial test.

(3) An owner or operator who is demonstrating coverage for liability and any other environmental obligations, including closure under subsection 6 of section 33.1-24-05-1063, through a financial test must meet the requirements of subsection 6 of section 33.1-24-05-1063.

b. Recordkeeping and reporting requirements.

(1) The owner or operator must submit the following items to the department:

(a) A letter signed by the owner's or operator's chief financial officer that provides evidence demonstrating that the firm meets the conditions of paragraphs 1 and 2 of subdivision a. If the firm is providing only liability coverage through a financial test for a facility or facilities with a permit under sections 33.1-24-05-950 through 33.1-24-05-1149, the letter should use the wording in subsection 2 of section 33.1-24-05-1071. If the firm is providing only liability coverage through a financial test for facilities regulated under sections 33.1-24-05-950 through 33.1-24-05-1149 and also sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 or subsection 5 of section 33.1-24-06-16, the firm should use the letter in subsection 7 of section 33.1-24-05-81. If the firm is providing liability coverage through a financial test for a facility or facilities with a permit under sections 33.1-24-05-950 through 33.1-24-05-1149, and the firm assures closure costs or any other environmental obligations through a financial test, the firm must use the letter in subsection 1 of section 33.1-24-05-1071 for the facilities issued a permit under sections 33.1-24-05-950 through 33.1-24-05-1149.

(b) A copy of the independent certified public accountant's unqualified opinion of the owner's or operator's financial statements for the latest completed fiscal year. To be eligible to use the financial test, the owner's or operator's financial statements must receive an unqualified opinion from the independent certified public accountant. An adverse opinion, disclaimer of opinion, or other qualified opinion will be cause for disallowance, with the potential exception for qualified opinions provided in the next sentence. The department may evaluate qualified opinions on a case-by-case basis and allow use of the financial test in cases where the department deems that the matters which form the basis for the qualification are insufficient to warrant disallowance of the test. If the department does not allow use of the test, the owner or operator must provide alternate financial assurance that meets the requirements of this section within thirty days after the notification of disallowance.

(c) If the chief financial officer's letter providing evidence of financial assurance includes financial data showing that the owner or operator satisfies paragraphs 1 and 2 of subdivision a that are different from data in the audited financial statements referred to in subparagraph b or any other audited financial statement or data filed with the securities and exchange commission, then a special report from the owner's or operator's independent certified public accountant to the owner or operator is required. The special report shall be based upon an agreed upon procedures engagement in accordance with professional auditing

standards and shall describe the procedures performed in comparing the data in the chief financial officer's letter derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements, the findings of that comparison, and the reasons for any differences.

(2) The owner or operator of a new facility must submit the items specified in paragraph 1 to the department at least sixty days before placing waste in the facility.

(3) After the initial submission of items specified in paragraph 1, the owner or operator must send updated information to the department within ninety days following the close of the owner or operator's fiscal year. The department may provide up to an additional forty-five days for an owner or operator who can demonstrate that ninety days is insufficient time to acquire audited financial statements. The updated information must consist of all items specified in paragraph 1.

(4) The owner or operator is no longer required to submit the items specified in this subdivision or comply with the requirements of this subsection when:

(a) The owner or operator substitutes alternate financial assurance as specified in this section that is not subject to these recordkeeping and reporting requirements; or

(b) The department releases the owner or operator from the requirements of this subsection in accordance with subsection 5.

(5) An owner or operator who no longer meets the requirements of subdivision a cannot use the financial test to demonstrate financial assurance. An owner or operator who no longer meets the requirements of subdivision a, must:

(a) Send notice to the department of intent to establish alternate financial assurance as specified in this section. The owner or operator must send this notice by certified mail within ninety days following the close of the owner or operator's fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements of this subsection.

(b) Provide alternative financial assurance within one hundred twenty days after the end of such fiscal year.

(6) The department may, based on a reasonable belief that the owner or operator may no longer meet the requirements of subdivision a, require at any time the owner or operator to provide reports of its financial condition in addition to or including current financial test documentation as specified in subdivision b. If the department finds that the owner or operator no longer meets the requirements of subdivision a, the owner or operator must provide alternate financial assurance that meets the requirements of this section.

7. Guarantee for liability coverage.

a. Subject to subdivision b, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee". The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in subdivisions a and b of subsection 6. The wording of the guarantee must be identical to the wording specified in subdivision b of subsection 8 of section 33.1-24-05-81. A certified copy of the guarantee must accompany the items sent to the department as specified in subdivision b of subsection 6. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(1) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden accidental occurrences arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(2) [Reserved]

b. The following applies:

(1) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the attorneys general or insurance commissioners of the state in which the guarantor is incorporated, and each state in which a facility covered by the guarantee is located, have submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 8 of section 33.1-24-05-81 is a legally valid and enforceable obligation in that state.

(2) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if:

(a) The non-United States corporation has identified a registered agent for service of process in each state in which a facility covered by the guarantee is located and in the state in which it has its principal place of business; and

(b) The attorney general or insurance commissioner of each state in which a facility covered by the guarantee is located and the state in which the guarantor corporation has its principal place of business, has submitted a written statement to the department that a guarantee executed as described in this section and subdivision b of subsection 8 of section 33.1-24-05-81 is a legally valid and enforceable obligation in that state.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1068. Incapacity of owners or operators, guarantors, or financial institutions.

1. An owner or operator must notify the department by certified mail of the commencement of a voluntary or involuntary proceeding under title 11 (bankruptcy), United States code, naming the owner or operator as debtor, within ten days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in subsection 7 of section 33.1-24-05-1063 and subsection 7 of section 33.1-24-05-1067 must make such a notification if the owner or operator is named as debtor, as required under the terms of the corporate guarantee (subsection 8 of section 33.1-24-05-81).
2. An owner or operator who fulfills the requirements of section 33.1-24-05-1063 or section 33.1-24-05-1067 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within sixty days after such an event.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1069. [Reserved].

33.1-24-05-1070. [Reserved].

33.1-24-05-1071. Wording of the instruments.

1. The chief financial officer of an owner or operator of a facility with a standardized permit who uses a financial test to demonstrate financial assurance for that facility must complete a letter as specified in subsection 6 of section 33.1-24-05-1063. The letter must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure costs, as specified in sections 33.1-24-05-1060 through 33.1-24-05-1079. This firm qualifies for the financial test on the basis of having [insert "a current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's" or "a ratio of less than 1.50 comparing total liabilities to net worth" or "a ratio of greater than 0.10 comparing the sum of net income plus depreciation, depletion and amortization, minus ten million dollars, to total liabilities"].

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[If this firm qualifies on the basis of its bond rating fill in the requested information: "This firm has a rating of its senior unsecured debt of" [insert the bond rating] "from" [insert "Standard and Poor's" or "Moody's"].

[Complete Line 1. Total Liabilities below and then skip the remaining questions in the next section and resume completing the form at the section entitled Obligations Covered by a Financial Test or Corporate Guarantee.]

[If this firm qualifies for the financial test on the basis of its ratio of liabilities to net worth, or sum of income, depreciation, depletion, and amortization to net worth, please complete the following section.]

*1. <u>Total Liabilities</u>	\$
*2. <u>Net Worth</u>	\$
*3. <u>Net Income</u>	\$
*4. <u>Depreciation</u>	\$
*5. <u>Depletion (if applicable)</u>	\$
*6. <u>Amortization</u>	\$
*7. <u>Sum of Lines 3, 4, 5, and 6</u>	\$

[If the above figures are taken directly from the most recent audited financial statements for this firm insert "The above figures are taken directly from the most recent audited financial statements for this firm". If they are not, insert "The following items are not taken directly from the firms most recent audited financial statements" [insert the numbers of the items and attach an explanation of how they were derived]].

[Complete the following calculations]

8. <u>Line 1. ÷ Line 2. =</u>	\$	
9. <u>Line 7. ÷ Line 1. =</u>	\$	
<u>Is Line 8. less than 1.5?</u>	<u>Yes</u>	<u>No</u>
<u>Is Line 9. greater than 0.10?</u>	<u>Yes</u>	<u>No</u>

[If the owner or operator did not answer Yes to either of these two questions, the owner or operator cannot use the financial test and need not complete this letter. Instead, the owner or operator must notify the department that the owner or operator intends to establish alternate financial assurance as specified in section 33.1-24-05-1063. The owner or operator must send this notice by certified mail within ninety days following the close of the owner's or operator's fiscal year for which the yearend financial data show that the owner or operator no longer meets the requirements of this section. The owner or operator must also provide alternative financial assurance within one hundred twenty days after the end of such fiscal year].

Obligations Covered by a Financial Test or Corporate Guarantee

[On the following lines list all obligations that are covered by a financial test or a corporate guarantee extended by the owner's or operator's firm. The owner or operator may add additional lines and leave blank entries that do not apply to the owner's or operator's situation.]

<u>Hazardous Waste Facility Name and ID</u>	<u>State</u>	<u>Closure</u>	<u>Post-Closure</u>	<u>Corrective Action</u>
_____	_____	\$ _____	\$ _____	\$ _____
_____	_____	\$ _____	\$ _____	\$ _____

Hazardous Waste Third Party Liability \$ _____

<u>Municipal Waste Facilities</u>	<u>State</u>	<u>Closure</u>	<u>Post-Closure</u>	<u>Corrective Action</u>
_____	_____	\$ _____	\$ _____	\$ _____
_____	_____	\$ _____	\$ _____	\$ _____

<u>Underground Injection Control</u>	<u>State</u>	<u>Plugging Action</u>
_____	_____	\$ _____
<u>Petroleum Underground Storage Tanks</u>		\$ _____

<u>PCB Storage Facility Name and ID</u>	<u>State</u>	<u>Closure</u>
_____	_____	\$ _____

Any financial assurance required under, or as part of an action undertaken under, the Comprehensive Environmental Response, Compensation, and Liability Act:

<u>Site Name</u>	<u>State</u>	<u>Amount</u>
_____	_____	\$ _____

Any other environmental obligations that are assured through a financial test:

<u>Name</u>	<u>Amount</u>
_____	\$ _____

<u>*10. Total of all amounts</u>	\$ _____
<u>*11. Line 10. + \$10,000,000 =</u>	\$ _____
<u>*12. Total Assets</u>	\$ _____
<u>*13. Intangible Assets</u>	\$ _____
<u>*14. Tangible Assets (Line 12. - Line 13.)</u>	\$ _____
<u>*15. Tangible Net Worth (Line 14. - Line 1.)</u>	\$ _____

*16. <u>Assets in the United States</u>	\$		
<u>Is Line 15. greater than Line 11?</u>		<u>Yes</u>	<u>No</u>
<u>Is Line 16. no less than Line 10?</u>		<u>Yes</u>	<u>No</u>

[The owner or operator must be able to answer Yes to both these questions to use the financial test for this facility.]

I hereby certify that the wording of this letter is identical to the wording specified in section 33.1-24-05-1071 as such rules were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

[After completion, a signed copy of the form must be sent to the department. In addition, a signed copy must be sent to every authority who requires a demonstration through a financial test for each of the other obligations in the letter that are assured through a financial test, or accepts a guarantee for an obligation listed in this letter.]

2. The chief financial officer of an owner or operator of a facility with a standardized permit who use a financial test to demonstrate financial assurance only for third party liability for that (or other standardized permit) facility or facilities must complete a letter as specified in subsection 6 of section 33.1-24-05-1067. The letter must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for third party liability, as specified in sections 33.1-24-05-1060 through 33.1-24-05-1079. This firm qualifies for the financial test on the basis of having tangible net worth of at least ten million dollars more than the amount of liability coverage and assets in the United States of at least the amount of liability coverage.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Please complete the following section.]

*1. <u>Total Assets</u>	\$
*2. <u>Intangible Assets</u>	\$
*3. <u>Tangible Assets (Line 1. - Line 2.)</u>	\$

*4. <u>Total Liabilities</u>	\$	
5. <u>Tangible Net Worth (Line 3. - Line 4.)</u>	\$	
*6. <u>Assets in the United States</u>	\$	
7. <u>Amount of liability coverage</u>	\$	
<u>Is Line 5. at least \$10 million greater than Line 7?</u>	<u>Yes</u>	<u>No</u>
<u>Is Line 6. at least equal to Line 7?</u>	<u>Yes</u>	<u>No</u>

[The owner or operator must be able to answer Yes to both these questions to use the financial test for this facility.]

I hereby certify that the wording of this letter is identical to the wording specified in section 33.1-24-05-1071 as such rules were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

[After completion, a signed copy of the form must be sent to the department.]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1072. [Reserved].

33.1-24-05-1073. [Reserved].

33.1-24-05-1074. [Reserved].

33.1-24-05-1075. [Reserved].

33.1-24-05-1076. [Reserved].

33.1-24-05-1077. [Reserved].

33.1-24-05-1078. [Reserved].

33.1-24-05-1079. [Reserved].

33.1-24-05-1080. Applicability of requirements for use and management of containers.

Sections 33.1-24-05-1080 through 33.1-24-05-1099 applies to owners or operators of facilities that treat or store hazardous waste in containers under sections 33.1-24-06-45 through 33.1-24-06-85, except as provided in subsection 2 of section 33.1-24-05-950.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1081. Container standards.

Standards apply to the condition of the containers, to the compatibility of waste with the containers, and to the management of the containers.

1. Condition of containers. If a container holding hazardous waste is not in good condition (for example, it exhibits severe rusting or apparent structural defects) or if it begins to leak, the owner or operator must either:

a. Transfer the hazardous waste from this container to a container that is in good condition; or

b. Manage the waste in some other way that complies with the requirements of sections 33.1-24-05-950 through 33.1-24-05-1149.

2. Compatibility of waste with containers. To ensure that the ability of the container to contain the waste is not impaired, the owner or operator must use a container made of or lined with materials that are compatible and will not react with the hazardous waste to be stored.

3. Management of containers.

a. The owner or operator must always keep a container holding hazardous waste closed during storage, except when it is necessary to add or remove waste.

b. The owner or operator must never open, handle, or store a container holding hazardous waste in a manner that may rupture the container or cause it to leak.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1082. Inspections.

At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1083. Containment.

1. Container storage areas must have a containment system that is designed and operated in accordance with subsection 2, except as provided otherwise in subsection 3.

2. The containment system must be designed and operated as follows:

- a. A base must underlie the containers that is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
 - b. The base must be sloped or the containment system, must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.
 - c. The containment system must have sufficient capacity to contain ten percent of the volume of containers, or the volume of the largest container, whichever is greater. This requirement does not apply to containers that do not contain free liquids.
 - d. Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity, in addition to that required in subdivision c, to contain the liquid.
 - e. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area as promptly as is necessary to prevent overflow of the collection system.
3. Storage areas that store containers holding only wastes with no free liquids need not have a containment system as defined in subsection 2, except as provided by subsection 4, if:
 - a. The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or
 - b. The containers are elevated or are otherwise protected from contact with accumulated liquid.
 4. Storage areas that store containers holding F020, F021, F022, F023, F026, and F027 wastes that do not contain free liquids must have a containment system as defined by subsection 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1084. Special requirements for ignitable or reactive wastes.

Containers holding ignitable or reactive waste must be located at least fifteen meters (fifty feet) from the facility's property line. The owner or operator must also follow the general requirements for ignitable or reactive wastes that are specified in subsection 1 of section 33.1-24-05-967.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1085. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials (see appendix III to chapter 33.1-24-05 for examples), must not be placed in the same container, unless subsection 2 of section 33.1-24-05-967 is complied with.
2. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.
3. A storage container holding a hazardous waste that is incompatible with any waste or with other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1086. Closure.

At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1087. Air emission standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the requirements of sections 33.1-24-05-400 through 33.1-24-05-474. Under a standardized permit, the following control devices are permissible: thermal vapor incinerator, catalytic vapor incinerator, flame, boiler, process heater, condenser, and carbon absorption unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1088. [Reserved].

33.1-24-05-1089. [Reserved].

33.1-24-05-1090. [Reserved].

33.1-24-05-1091. [Reserved].

33.1-24-05-1092. [Reserved].

33.1-24-05-1093. [Reserved].

33.1-24-05-1094. [Reserved].

33.1-24-05-1095. [Reserved].

33.1-24-05-1096. [Reserved].

33.1-24-05-1097. [Reserved].

33.1-24-05-1098. [Reserved].

33.1-24-05-1099. [Reserved].

33.1-24-05-1100. Applicability of tank requirements.

The requirements of sections 33.1-24-05-1100 through 33.1-24-05-1129 applies to owners or operators of facilities that treat or store hazardous waste in above ground or on ground tanks under sections 33.1-24-06-45 through 33.1-24-06-85, standardized permit, except as provided in subsection 2 of section 33.1-24-05-950.

1. Tank systems which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in section 33.1-24-05-1105. To demonstrate the absence or presence of free liquids in the stored or treated waste, the following test must be used: method 9095B (paint filter liquids test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05.
2. Tank systems, including sumps, as defined in section 33.1-24-01-04, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements of subsection 1 of section 33.1-24-05-1105.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1101. Design and construction standards for new tank systems or components.

Owners or operators must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the wastes to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment, reviewed and certified by a qualified professional engineer, in accordance with subsection 4 of section 33.1-24-06-03, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:

1. Design standards for the construction of tanks or the ancillary equipment, or both.
2. Hazardous characteristics of the wastes to be handled.
3. For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:
 - a. Factors affecting the potential for corrosion, such as:
 - (1) Soil moisture content.

- (2) Soil pH.
- (3) Soil sulfides level.
- (4) Soil resistivity.
- (5) Structure to soil potential.
- (6) Existence of stray electric current.
- (7) Existing corrosion protection measures (for example, coating, cathodic protection).
- b. The type and degree of external corrosion protection needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
 - (1) Corrosion resistant materials of construction such as special alloys, fiberglass reinforced plastic;
 - (2) Corrosion resistant coating (such as epoxy, fiberglass) with cathodic protection (for example, impressed current or sacrificial anodes); and
 - (3) Electrical isolation devices such as insulating joints, flanges.
- 4. Design considerations to ensure that:
 - a. Tank foundations will maintain the load of a full tank.
 - b. Tank systems will withstand the effects of frost heave.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1102. Handling and inspection procedures during installation of a new tank system.

- 1. The owner or operator shall ensure that proper handling procedures are followed to prevent damage to a new tank system during installation. Before placing a new tank system or component in use an independent, qualified installation inspector or a qualified professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:
 - a. Weld breaks.
 - b. Punctures.
 - c. Scrapes of protective coatings.
 - d. Cracks.
 - e. Corrosion.

- f. Other structural damage or inadequate construction or installation.
2. The owner or operator must remedy all discrepancies before the tank system is placed in use.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1103. Testing.

All new tanks and ancillary equipment must be tested for tightness before being placed into use. If a tank system is found not to be tight, all repairs necessary to remedy the leaks in the system must be performed prior to covering, enclosing, or placing the tank system into use.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1104. Installation requirements.

1. The owner or operator must support and protect ancillary equipment against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.
2. The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under subsection 3 of section 33.1-24-05-1101, to ensure the integrity of the tank system during use of the tank system. An independent corrosion expert must supervise the installation of a corrosion protection system that is field fabricated to ensure proper installation.
3. The owner or operator must obtain, and keep at the facility, written statements by those persons required to certify the design of the tank system and to supervise the installation of the tank system as required in sections 33.1-24-05-1102, 33.1-24-05-1103, and subsections 1 and 2. The written statement must attest that the tank system was properly designed and installed and that the owner or operator made repairs under sections 33.1-24-05-1102 and 33.1-24-05-1103. These written statements must also include the certification statement as required in subsection 4 of section 33.1-24-06-03.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1105. Secondary containment requirements.

To prevent the release of hazardous waste or hazardous constituents to the environment, the owner or operator must provide secondary containment that meets the requirements of this section for all new and existing tank systems.

1. Secondary containment systems must be:
- a. Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

- b. Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.
- 2. To meet the requirements of subsection 1, secondary containment systems must be, at a minimum:
 - a. Constructed of or lined with materials that are compatible with the wastes to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic).
 - b. Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift.
 - c. Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within twenty-four hours.
 - d. Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within twenty-four hours, or as promptly as possible, to prevent harm to human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1106. Secondary containment devices.

- 1. Secondary containment for tanks must include one or more of the following:
 - a. A liner (external to the tank).
 - b. A double-walled tank.
 - c. An equivalent device (documentation of equivalency must be maintained at the facility).
- 2. External liner systems must be:
 - a. Designed or operated to contain one hundred percent of the capacity of the largest tank within its boundary.
 - b. Designed or operated to prevent run on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run on or infiltration. The additional capacity must be sufficient to contain precipitation from a twenty-five year, twenty-four hour rainfall event.
 - c. Free of cracks or gaps.

d. Designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tanks (capable of preventing lateral as well as vertical migration of the waste).

3. Double-walled tanks must be:

a. Designed as an integral structure (an inner tank completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell.

b. Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell.

c. Provided with a built-in continuous leak detection system capable of detecting a release within twenty-four hours.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1107. Requirements for ancillary equipment.

An owner or operator must provide ancillary equipment with secondary containment (for example, trench, jacketing, doublewalled piping) that meets the requirements of subsections 1 and 2 of section 33.1-24-05-1105, except for:

1. Above ground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;

2. Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

3. Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and

4. Pressurized above ground piping systems with automatic shutoff devices (for example, excess flow check valves, flow metering shutdown devices, loss of pressure actuated shutoff devices) that are visually inspected for leaks on a daily basis.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1108. General operating requirements.

1. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

2. The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:

a. Spill prevention controls (for example, check valves, dry disconnect couplings).

- b. Overfill prevention controls (for example, level sensing devices, high-level alarms, automatic feed cutoff, or bypass to a standby tank).
 - c. Sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
3. The owner or operator must comply with the requirements of section 33.1-24-05-1110 if a leak or spill occurs in the tank system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1109. Inspections.

- 1. The owner or operator shall develop and follow a schedule and procedure for inspecting overfill controls.
- 2. The owner or operator shall inspect at least once each operating day:
 - a. Aboveground portions of the tank system to detect corrosion or releases of waste.
 - b. Data gathered from monitoring and leak detection equipment (for example, pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design.
 - c. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (for example, dikes) to detect erosion or signs of releases of hazardous waste (for example, wet spots, dead vegetation).
- 3. The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:
 - a. Confirm that the cathodic protection system is operating properly within six months after initial installation and annually thereafter.
 - b. Inspect or test, or both, all sources of impressed current, as appropriate, at least every other month.
- 4. The owner or operator shall document, in the operating record of the facility, an inspection of those items in subsections 1 through 3.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1110. Response to leaks or spills.

A tank system or secondary containment system from which there has been a leak or spill, or if either system is unfit for use, the owner or operator must remove the system from service immediately, and must satisfy the following requirements:

1. Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.
2. Remove the waste from the tank system or secondary containment system.
 - a. If the release was from the tank system, the owner or operator must, within twenty-four hours after detecting the leak, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
 - b. If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or as quickly as possible to prevent harm to human health and the environment.
3. Immediately conduct a visual inspection of the release and, based upon that inspection:
 - a. Prevent further migration of the leak or spill to soils or surface water.
 - b. Remove, and properly dispose of, any visible contamination of the soil or surface water.
4. Report any release to the environment, except as provided in subdivision a, to the department within twenty-four hours of its detection. The release should also be reported pursuant to 40 CFR part 302.
 - a. A leak or spill of hazardous waste is exempted from this subsection if it is:
 - (1) Less than or equal to a quantity of one pound; and
 - (2) Immediately contained and cleaned up.
 - b. Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the department:
 - (1) Likely route of migration of the release.
 - (2) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate).
 - (3) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the department as soon as they become available.
 - (4) Proximity to downgradient drinking water, surface water, and populated areas.
 - (5) Description of response actions taken or planned.
5. Either close the system or make necessary repairs.
 - a. Unless the owner or operator satisfies the requirements of subdivisions b and c, the tank system must be closed according to section 33.1-24-05-1111.

- b. If the cause of the release was a spill that has not damaged the integrity of the system, the owner or operator may return the system to service as soon as the released waste is removed and any necessary repairs are made.
 - c. If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired before returning the tank system to service.
6. If the owner or operator has made extensive repairs to a tank system in accordance with subsection 5 (for example, installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system may not be returned to service unless the owner or operator has obtained a certification by a qualified professional engineer in accordance with subsection 4 of section 33.1-24-06-03.
- a. The engineer must certify that the repaired system is capable of handling hazardous wastes without release for the intended life of the system.
 - b. This certification must be submitted to the department within seven days after returning the tank system to use.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1111. Closure.

At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless subsection 4 of section 33.1-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in sections 33.1-24-05-1040 through 33.1-24-05-1079.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1112. Special requirements for ignitable or reactive wastes.

- 1. Ignitable or reactive wastes may not be placed in tank systems, unless:
 - a. The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:
 - (1) Subsection 2 of section 33.1-24-05-967 is complied with; and
 - (2) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under section 33.1-24-02-11 or 33.1-24-02-13; or
 - b. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
 - c. The tank system is used solely for emergencies.

2. The owner or operator of the facility where ignitable or reactive waste is stored or treated in a tank, must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in tables 2-1 through 2-6 of the national fire protection association's "flammable and combustible liquids code," (1977 or 1981), incorporated by reference, see section 33.1-24-01-05.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1113. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials, may not be placed in the same tank system, unless subsection 2 of section 33.1-24-05-967 is complied with.
2. Hazardous waste may not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless subsection 2 of section 33.1-24-05-967 is complied with.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1114. Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the requirements of sections 33.1-24-05-400 through 33.1-24-05-474. Under a standardized permit, the following control devices are permissible: thermal vapor incinerator, catalytic vapor incinerator, flame, boiler, process heater, condenser, and carbon absorption unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1115. [Reserved].

33.1-24-05-1116. [Reserved].

33.1-24-05-1117. [Reserved].

33.1-24-05-1118. [Reserved].

33.1-24-05-1119. [Reserved].

33.1-24-05-1120. [Reserved].

33.1-24-05-1121. [Reserved].

33.1-24-05-1122. [Reserved].

33.1-24-05-1123. [Reserved].

33.1-24-05-1124. [Reserved].

33.1-24-05-1125. [Reserved].

33.1-24-05-1126. [Reserved].

33.1-24-05-1127. [Reserved].

33.1-24-05-1128. [Reserved].

33.1-24-05-1129. [Reserved].

33.1-24-05-1130. Applicability of containment building requirements.

The requirements of sections 33.1-24-05-1130 through 33.1-24-05-1149 applies to owners or operators of facilities that treat or store hazardous waste in containment buildings under sections 33.1-24-06-45 through 33.1-24-06-85, standardized permit, except as provided in subsection 2 of section 33.1-24-05-950. Storage or treatment, or both, in a containment building is not land disposal as defined in section 33.1-24-05-251 if the unit meets the requirements of sections 33.1-24-05-1131, 33.1-24-05-1132, and 33.1-24-05-1133.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1131. Design and operating standards for containment buildings.

All containment buildings must comply with the design and operating standards in this section. The department will consider standards established by professional organizations generally recognized by the industry such as the American concrete institute and the American society of testing materials in judging the structural integrity requirements of this section.

1. The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (for example, precipitation, wind, run on), and to assure containment of managed wastes.
2. The floor and containment walls of the unit, including the secondary containment system, if required under section 33.1-24-05-1133, must be designed and constructed of manmade materials of sufficient strength and thickness to:
 - a. Support themselves, the waste contents, and any personnel and heavy equipment that operates within the unit.
 - b. Prevent failure due to:
 - (1) Pressure gradients, settlement, compression, or uplift.
 - (2) Physical contact with the hazardous wastes to which they are exposed.
 - (3) Climatic conditions.
 - (4) Stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls.
 - (5) Collapse or other failure.

3. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes.
4. Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.
5. A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.
6. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light weight doors and windows that meet these criteria:
 - a. They provide an effective barrier against fugitive dust emissions under subsection 4 of section 33.1-24-05-1132.
 - b. The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.
7. The owner or operator must inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment, as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.
8. The owner or operator must obtain certification by a qualified professional engineer that the containment building design meets the requirements of sections 33.1-24-05-1132, 33.1-24-05-1133, and subsections 1 through 6.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1132. Requirements to prevent releases.

Owners or operators must use controls and practices to ensure containment of the hazardous waste within the unit, and must, at a minimum:

1. Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier.
2. Maintain the level of the stored or treated, or both, hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded.
3. Take measures to prevent tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed.
4. Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks) exhibit no visible emissions (see 40 CFR part 60, appendix A, Method 22 - visual determination of fugitive emissions from material sources and smoke emissions from flares). In addition, all associated particulate collection devices (for

example, fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices. This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1133. Design and operating standards for liquids.

If the containment building will be used to manage hazardous wastes containing free liquids or treated with free liquids, as determined by the paint filter test, by a visual examination, or by other appropriate means, the owner or operator must include:

1. A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (for example, a geomembrane covered by a concrete wear surface).
2. A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building.
 - a. The primary barrier must be sloped to drain liquids to the associated collection system; and
 - b. Liquids and waste must be removed to minimize hydraulic head on the containment system at the earliest practicable time.
3. A secondary containment system, including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practical time.
 - a. The requirements of the leak detection component of the secondary containment system may be met by installing a system that is, at a minimum:
 - (1) Constructed with a bottom slope of one percent or more; and
 - (2) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} centimeters per second or more and a thickness of twelve inches (thirty and one-half centimeters) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} meters squared per second or more.
 - b. If treatment will be conducted in the building, the area in which the treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.
 - c. The secondary containment system must be constructed using materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1134. Waiver from secondary containment requirements.

Notwithstanding any other provision of sections 33.1-24-05-1130 through 33.1-24-05-1149, the department may waive requirements for secondary containment for a permitted containment building where:

1. The owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements; and
2. Containment of managed wastes and dust suppression liquids can be assured without a secondary containment system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1135. Containment building containing areas both with and without secondary containment.

Containment buildings that contain areas both with and without secondary containment, the owner or operator must:

1. Design and operate each area in accordance with the requirements in sections 33.1-24-05-1131 through 33.1-24-05-1133.
2. Take measures to prevent the release of liquids or wet materials into areas without secondary containment.
3. Maintain in the facility's operating record a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1136. Detection of releases.

Throughout the active life of the containment building, if a condition that could lead to or has caused a release of hazardous waste is detected, the owner or operator must repair the condition promptly, in accordance with the following procedures:

1. Upon detection of a condition that has lead to a release of hazardous waste (for example, upon detection of leakage from the primary barrier), the owner or operator must:
 - a. Enter a record of the discovery in the facility operating record;
 - b. Immediately remove the portion of the containment building affected by the condition from service;

- c. Determine what steps must be taken to repair the containment building, to remove any leakage from the secondary collection system, and to establish a schedule for accomplishing the cleanup and repairs; and
 - d. Within seven days after the discovery of the condition, notify the department of the condition, and within fourteen working days, provide a written notice to the department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.
2. The department will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.
 3. Upon completing all repairs and cleanup, the owner or operator must notify the department in writing and provide a verification, signed by a qualified professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subdivision d of subsection 1.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1137. Containment buildings used for secondary containment.

Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions.

1. A containment building can serve as an external liner system for a tank, provided it meets the requirements of subsection 1 of section 33.1-24-05-1106.
2. The containment building must also meet the requirements of subsection 1 and subdivisions a and b of subsection 2 of section 33.1-24-05-1105 to be considered an acceptable secondary containment system for a tank.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1138. Closure.

At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless subsection 4 of section 33.1-24-02-03 applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in sections 33.1-24-05-1040 through 33.1-24-05-1059 and 33.1-24-05-1060 through 33.1-24-05-1079.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-05-1139. [Reserved].

- 33.1-24-05-1140. [Reserved].
- 33.1-24-05-1141. [Reserved].
- 33.1-24-05-1142. [Reserved].
- 33.1-24-05-1143. [Reserved].
- 33.1-24-05-1144. [Reserved].
- 33.1-24-05-1145. [Reserved].
- 33.1-24-05-1146. [Reserved].
- 33.1-24-05-1147. [Reserved].
- 33.1-24-05-1148. [Reserved].
- 33.1-24-05-1149. [Reserved].
- 33.1-24-05-1150. [Reserved].
- 33.1-24-05-1151. [Reserved].
- 33.1-24-05-1152. [Reserved].
- 33.1-24-05-1153. [Reserved].
- 33.1-24-05-1154. [Reserved].
- 33.1-24-05-1155. [Reserved].
- 33.1-24-05-1156. [Reserved].
- 33.1-24-05-1157. [Reserved].
- 33.1-24-05-1158. [Reserved].
- 33.1-24-05-1159. [Reserved].
- 33.1-24-05-1160. [Reserved].
- 33.1-24-05-1161. [Reserved].
- 33.1-24-05-1162. [Reserved].
- 33.1-24-05-1163. [Reserved].
- 33.1-24-05-1164. [Reserved].
- 33.1-24-05-1165. [Reserved].
- 33.1-24-05-1166. [Reserved].
- 33.1-24-05-1167. [Reserved].
- 33.1-24-05-1168. [Reserved].

33.1-24-05-1169. [Reserved].

APPENDIX I

Recordkeeping Instructions

The recordkeeping instructions of section 33.1-24-05-40 specify that an owner or operator must keep a written operating record at the facility. This appendix provides additional instructions for keeping portions of the operating record. See subsection 2 of section 33.1-24-05-40 for additional recordkeeping requirements.

The following information must be recorded as it becomes available and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

1. A description by its common name and the hazardous waste numbers from chapter 33.1-24-02 which apply to the waste. The waste description must also include the wastes' physical form, for example, liquid, sludge, soil or contained gas. If the waste is not listed in chapter 33.1-24-02 the description must also include the process that produced it (for example, solid filter cake from the production of _____, hazardous waste number W051).

Each hazardous waste listed in and each hazardous waste characteristic defined in chapter 33.1-24-02 has a four-digit hazardous waste number assigned to it. This number must be used for recordkeeping and reporting purposes. Where more than one hazardous waste number applies, the waste description must include all applicable numbers.

2. The estimated or manifest-reported weight or volume and density, where applicable, in one of the units of measure specified in table 1.
3. The methods (by handling codes as specified in table 2) and the dates of treatment, storage, or disposal.

APPENDIX I (continued)

Table 1.

<u>Unit of Measure</u>	<u>Code¹</u>
<u>Gallons</u>	<u>G</u>
<u>Gallons per hour</u>	<u>E</u>
<u>Gallons per day</u>	<u>U</u>
<u>Liters</u>	<u>L</u>
<u>Liters per hour</u>	<u>H</u>
<u>Liters per day</u>	<u>V</u>
<u>Short tons per hour</u>	<u>D</u>
<u>Metric tons per hour</u>	<u>W</u>
<u>Short tons per day</u>	<u>N</u>
<u>Metric tons per day</u>	<u>S</u>
<u>Pounds per hour</u>	<u>J</u>
<u>Kilograms per hour</u>	<u>R</u>
<u>Cubic yards</u>	<u>Y</u>
<u>Cubic meters</u>	<u>C</u>
<u>Acres</u>	<u>B</u>
<u>Acre-feet</u>	<u>A</u>
<u>Hectares</u>	<u>Q</u>
<u>Hectare-meter</u>	<u>F</u>
<u>Btus per hour</u>	<u>I</u>
<u>Pounds</u>	<u>P</u>
<u>Short Tons</u>	<u>T</u>
<u>Kilograms</u>	<u>K</u>
<u>Tons</u>	<u>M</u>

FOOTNOTE: ¹Single digit symbols are used here for data processing purposes.

APPENDIX I (continued)

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods. Enter the handling code listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

1. Storage

- S01 Container (barrel, drum, etc.)
- S02 Tank
- S03 Waste pile
- S04 Surface impoundment
- S05 Drip pad

APPENDIX I (continued)

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods. Enter the handling code listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

S06 Containment building (storage)

S99 Other storage (specify)

2. Thermal Treatment

T06 Liquid injection incinerator

T07 Rotary kiln incinerator

T08 Fluidized bed incinerator

T09 Multiple hearth incinerator

T10 Infrared furnace incinerator

T11 Molten salt destructor

T12 Pyrolysis

T13 Wet air oxidation

T14 Calcination

T15 Microwave discharge

T18 Other (specify)

3. Chemical Treatment

T19 Absorption mound

T20 Absorption field

T21 Chemical fixation

T22 Chemical oxidation

T23 Chemical precipitation

T24 Chemical reduction

T25 Chlorination

T26 Chlorinolysis

T27 Cyanide destruction

T28 Degradation

T29 Detoxification

T30 Ion exchange

T31 Neutralization

T32 Ozonation

T33 Photolysis

T34 Other (specify)

4. Physical Treatment by Separation of Components

T35 Centrifugation

T36 Clarification

APPENDIX I (continued)

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods. Enter the handling code listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

- T37 Coagulation
- T38 Decanting
- T39 Encapsulation
- T40 Filtration
- T41 Flocculation
- T42 Flotation
- T43 Foaming
- T44 Sedimentation
- T45 Thickening
- T46 Ultrafiltration
- T47 Other (specify)

5. Physical Treatment by Removal of Specific Components

- T48 Absorption-molecular sieve
- T49 Activated carbon
- T50 Blending
- T51 Catalysis
- T52 Crystallization
- T53 Dialysis
- T54 Distillation
- T55 Electrodialysis
- T56 Electrolysis
- T57 Evaporation
- T58 High gradient magnetic separation
- T59 Leaching
- T60 Liquid ion exchange
- T61 Liquid-liquid extraction
- T62 Reverse osmosis
- T63 Solvent recovery
- T64 Stripping
- T65 Sand filter
- T66 Other (specify)

6. Biological Treatment

- T67 Activated sludge
- T68 Aerobic lagoon

APPENDIX I (continued)

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods. Enter the handling code listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

<u>T69</u>	<u>Aerobic tank</u>
<u>T70</u>	<u>Anaerobic tank</u>
<u>T71</u>	<u>Composting</u>
<u>T72</u>	<u>Septic tank</u>
<u>T73</u>	<u>Spray irrigation</u>
<u>T74</u>	<u>Thickening filter</u>
<u>T75</u>	<u>Trickling filter</u>
<u>T76</u>	<u>Waste stabilization pond</u>
<u>T77</u>	<u>Other (specify)</u>
<u>T78</u>	<u>[Reserved]</u>
<u>T79</u>	<u>[Reserved]</u>

7. Boilers and Industrial Furnaces

<u>T80</u>	<u>Boiler</u>
<u>T81</u>	<u>Cement kiln</u>
<u>T82</u>	<u>Lime kiln</u>
<u>T83</u>	<u>Aggregate kiln</u>
<u>T84</u>	<u>Phosphate kiln</u>
<u>T85</u>	<u>Coke oven</u>
<u>T86</u>	<u>Blast furnace</u>
<u>T87</u>	<u>Smelting, melting, or refining furnace</u>
<u>T88</u>	<u>Titanium dioxide chloride process oxidation reactor</u>
<u>T89</u>	<u>Methane reforming furnace</u>
<u>T90</u>	<u>Pulping liquor recovery furnace</u>
<u>T91</u>	<u>Combustion device used in the recovery of sulfur values from spent sulfuric acid</u>
<u>T92</u>	<u>Halogen acid furnaces</u>
<u>T93</u>	<u>Other industrial furnaces listed in section 33.1-24-01-04 (specify)</u>

8. Other treatment

<u>T94</u>	<u>Containment building (treatment)</u>
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9. Disposal

<u>D79</u>	<u>Underground injection</u>
<u>D80</u>	<u>Landfill</u>
<u>D81</u>	<u>Land treatment</u>
<u>D82</u>	<u>Ocean disposal</u>

APPENDIX I (continued)

Table 2. Handling Codes for Treatment, Storage, and Disposal Methods. Enter the handling code listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

D83 Surface impoundment (to be closed as a landfill)

D99 Other disposal (specify)

10. Miscellaneous Units

X01 Open burning/open detonation

X02 Mechanical processing

X03 Thermal unit

X04 Geologic repository

X99 Other miscellaneous unit (specify)

APPENDIX II

Cochran's Approximation to the Behrens-Fisher Student's T-Test

Using all the available background data (n_b readings) calculate the background mean (X_b) and background variance (S_b^2). For the single monitoring well under investigation (n_m reading), calculate the monitoring mean (X_m) and monitoring variance (S_m^2). For any set of data (X_1, X_2, \dots, X_n) the mean is calculated by:

$$\bar{X} = \frac{X_1 + X_2 \dots + X_n}{n}$$

And the variance is calculated by:

$$S^2 = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 \dots + (X_n - \bar{X})^2}{n - 1}$$

Where "n" denotes the number of observations in the set of data.

The T-Test uses these data summary measures to calculate a T-statistic (T^*) and a comparison T-statistic (T_c). The T^* is compared to the T_c value and a conclusion reached as to whether there has been a statistically significant change in any indicator parameter.

The T-statistic for all parameters, except pH and similar monitoring parameters, is:

$$T^* = \frac{X_m - \bar{X}_B}{\sqrt{\frac{S_m^2}{n_m} + \frac{S_B^2}{n_b}}}$$

If the value of this T-statistic is negative, then there is no significant difference between the monitoring data and the background data. It should be noted that significantly small negative values may be indicative of a failure of the assumption made for test validity or errors have been made in collecting the background data.

The T-statistic (T_c) against which T^* will be compared necessitates finding T_b and T_m from standard (one-tailed) tables where:

T_b = T-tables ($n_b - 1$) degrees of freedom at the 0.05 level of significance.

T_m = T-tables with ($n_m - 1$) degrees of freedom at the 0.05 level of significance.

Finally, the special weightings W_B and W_m are defined as:

$$W_B = \frac{S_B^2}{n_B} \text{ and } W_m = \frac{S_m^2}{n_m}$$

APPENDIX II (continued)
Cochran's Approximation to the Behrens-Fisher Student's T-Test

And so the comparison T-statistic is:

$$T_c = \frac{W_B T_B + W_m T_m}{W_B + W_m}$$

The T-statistic (T^*) is now compared with the comparison T-statistic (T_c) using the following decision rule:

If T^* is equal to or larger than T_c , then conclude that there most likely has been a significant increase in this specific parameter. If T^* is less than T_c , then conclude that most likely there has not been a change in this specific parameter.

The T-statistic for testing pH and similar monitoring parameters is constructed in the same manner as previously described, except the negative sign (if any) is discarded and the caveat concerning the negative value is ignored. The standard (two-tailed) tables are used in the construction T_c for pH and similar monitoring parameters.

If T^* is equal to or larger than T_c , then conclude that there most likely has been a significant increase (if the initial T^* had been negative, this would imply a significant decrease).

If T^* is less than T_c then conclude that there most likely has been no change.

A further discussion of the test may be found in STATISTICAL METHODS (6th Edition, Section 4.14) by G. W. Snedecor and W. G. Cochran, or PRINCIPLES AND PROCEDURES OF STATISTICS (1st Edition, Section 5.8) by R. G. D. Steel and J. H. Torrie.

APPENDIX II (continued)
Cochran's Approximation to the Behrens-Fisher Student's T-Test

Standard T-Tables
0.05 Level of Significance

<u>Degrees of Freedom</u>	<u>T-Values (1-tailed)</u>	<u>T-Values (2-tailed)</u>
<u>1</u>	<u>6.314</u>	<u>12.706</u>
<u>2</u>	<u>2.920</u>	<u>4.303</u>
<u>3</u>	<u>2.353</u>	<u>3.182</u>
<u>4</u>	<u>2.132</u>	<u>2.776</u>
<u>5</u>	<u>2.015</u>	<u>2.571</u>
<u>6</u>	<u>1.943</u>	<u>2.447</u>
<u>7</u>	<u>1.895</u>	<u>2.365</u>
<u>8</u>	<u>1.860</u>	<u>2.306</u>
<u>9</u>	<u>1.833</u>	<u>2.262</u>
<u>10</u>	<u>1.812</u>	<u>2.228</u>
<u>11</u>	<u>1.796</u>	<u>2.201</u>
<u>12</u>	<u>1.782</u>	<u>2.179</u>
<u>13</u>	<u>1.771</u>	<u>2.160</u>
<u>14</u>	<u>1.761</u>	<u>2.145</u>
<u>15</u>	<u>1.753</u>	<u>2.131</u>
<u>16</u>	<u>1.746</u>	<u>2.120</u>
<u>17</u>	<u>1.740</u>	<u>2.110</u>
<u>18</u>	<u>1.734</u>	<u>2.101</u>
<u>19</u>	<u>1.729</u>	<u>2.093</u>
<u>20</u>	<u>1.725</u>	<u>2.086</u>
<u>21</u>	<u>1.721</u>	<u>2.080</u>
<u>22</u>	<u>1.717</u>	<u>2.074</u>
<u>23</u>	<u>1.714</u>	<u>2.069</u>
<u>24</u>	<u>1.711</u>	<u>2.064</u>
<u>25</u>	<u>1.708</u>	<u>2.060</u>
<u>30</u>	<u>1.697</u>	<u>2.042</u>
<u>40</u>	<u>1.684</u>	<u>2.021</u>

Taken from 40 CFR, Part 264, Appendix IV, 47FR34329, July 26, 1982.

APPENDIX III

Examples of Potentially Incompatible Waste

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (for example, adding acid to water rather than water to acid) or that neutralizes them (for example, a strong acid mixed with a strong base), or that controls substances produced (for example, by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

Group 1-A

Acetylene sludge

Alkaline caustic liquids

Alkaline cleaner

Alkaline corrosive liquids

Alkaline corrosive battery fluid

Caustic wastewater

Lime sludge and other corrosive alkalies

Lime wastewater

Lime and water

Spent caustic

APPENDIX III (continued)
Examples of Potentially Incompatible Waste

Group 1-B

Acid sludge

Acid and water

Battery acid

Chemical cleaners

Electrolyte, acid

Etching acid liquid or solvent

Pickling liquor and other corrosive acids

Spent acid

Spent mixed acid

Spent sulfuric acid

Potential consequences: Heat generation; violent reaction.

Group 2-A

Aluminum

Beryllium

Calcium

Lithium

Magnesium

Potassium

Sodium

Zinc powder

Other reactive metals and metal hydrides

Group 2-B

Any Waste in Group 1-A or 1-B

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

Group 3-A

Alcohols

Water

Group 3-B

Any concentrated waste in Groups 1-A or 1-B

APPENDIX III (continued)
Examples of Potentially Incompatible Waste

Calcium

Lithium

Metal hydrides

Potassium

SO₂Cl₂, SOCl₂, PCl₃,

CH₃SiCl₃

Other water-reactive waste (potential consequences):

Fire, explosion, or heat generation; generation of flammable or toxic gases.

Group 4-A

Alcohols

Aldehydes

Halogenated hydrocarbons

Nitrated hydrocarbons

Unsaturated hydrocarbons

Other reactive organic compounds and solvents

Group 4-B

Concentrated Group 1-A or 1-B wastes

Group 2-A wastes

Potential consequences: Fire, explosion, or violent reaction.

Group 5-A

Spent cyanide and sulfide solutions

Group 5-B

Group 1-B wastes

Potential consequences: generation of toxic hydrogen cyanide or hydrogen sulfide gas.

Group 6-A

Chlorates

Chlorine

Chlorites

APPENDIX III (continued)
Examples of Potentially Incompatible Waste

Chromic acid

Hypochlorites

Nitrates

Nitric acid, fuming

Perchlorates

Permanganates

Peroxides

Other strong oxidizers

Group 6-B

Acetic acid and other organic acids

Concentrated mineral acids

Group 2-A wastes

Group 4-A wastes

Other flammable and combustible wastes

Potential consequences: Fire, explosion, or violent reaction.

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 1 of 9)

OMB# 2050-0024; Expires 05/31/2020

United States Environmental Protection Agency RCRA SUBTITLE C SITE IDENTIFICATION FORM	
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1. Reason for Submittal (Select only one.)

<input type="checkbox"/>	Obtaining or updating an EPA ID number for an on-going regulated activity that will continue for a period of time. (Includes HSM activity)
<input type="checkbox"/>	Submitting as a component of the Hazardous Waste Report for _____ (Reporting Year)
<input type="checkbox"/>	Site was a TSD facility and/or generator of > 1,000 kg of hazardous waste, > 1 kg of acute hazardous waste, or > 100 kg of acute hazardous waste spill cleanup in one or more months of the reporting year (or State equivalent LQG regulations)
<input type="checkbox"/>	Notifying that regulated activity is no longer occurring at this Site
<input type="checkbox"/>	Obtaining or updating an EPA ID number for conducting Electronic Manifest Broker activities
<input type="checkbox"/>	Submitting a new or revised Part A Form

2. Site EPA ID Number

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3. Site Name

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4. Site Location Address

Street Address			
City, Town, or Village		County	
State	Country	Zip Code	

5. Site Mailing Address

Same as Location Address

Street Address			
City, Town, or Village			
State	Country	Zip Code	

6. Site Land Type

<input type="checkbox"/> Private	<input type="checkbox"/> County	<input type="checkbox"/> District	<input type="checkbox"/> Federal	<input type="checkbox"/> Tribal	<input type="checkbox"/> Municipal	<input type="checkbox"/> State	<input type="checkbox"/> Other
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7. North American Industry Classification System (NAICS) Code(s) for the Site (at least 5-digit codes)

A. (Primary)	C.
B.	D.

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 2 of 9)

EPA ID Number

OMB# 2050-0024; Expires 05/31/2020

8. Site Contact Information

Same as Location Address

First Name	MI	Last Name
Title		
Street Address		
City, Town, or Village		
State	Country	Zip Code
Email		
Phone	Ext	Fax

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner

Same as Location Address

Full Name	Date Became Owner (mm/dd/yyyy)
Owner Type <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other	
Street Address	
City, Town, or Village	
State	Country
Zip Code	
Email	
Phone	Ext
Fax	
Comments	

B. Name of Site's Legal Operator

Same as Location Address

Full Name	Date Became Operator (mm/dd/yyyy)
Operator Type <input type="checkbox"/> Private <input type="checkbox"/> County <input type="checkbox"/> District <input type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Municipal <input type="checkbox"/> State <input type="checkbox"/> Other	
Street Address	
City, Town, or Village	
State	Country
Zip Code	
Email	
Phone	Ext
Fax	
Comments	

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 3 of 9)

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10. Type of Regulated Waste Activity (at your site)

Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities

<input type="checkbox"/> Y <input type="checkbox"/> N	1. Generator of Hazardous Waste—If "Yes", mark only one of the following—a, b, c	
<input type="checkbox"/>	a. LQG	-Generates, in any calendar month (includes quantities imported by importer site) 1,000 kg/mo (2,200 lb/mo) or more of non-acute hazardous waste; or - Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lb/mo) of acute hazardous waste; or - Generates, in any calendar month or accumulates at any time, more than 100 kg/mo (220 lb/mo) of acute hazardous spill cleanup material.
<input type="checkbox"/>	b. SQG	100 to 1,000 kg/mo (220-2,200 lb/mo) of non-acute hazardous waste and no more than 1 kg (2.2 lb) of acute hazardous waste and no more than 100 kg (220 lb) of any acute hazardous spill cleanup material.
<input type="checkbox"/>	c. VSQG	Less than or equal to 100 kg/mo (220 lb/mo) of non-acute hazardous waste.
If "Yes" above, indicate other generator activities in 2 and 3, as applicable.		
<input type="checkbox"/> Y <input type="checkbox"/> N	2. Short-Term Generator (generates from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section.	
<input type="checkbox"/> Y <input type="checkbox"/> N	3. Mixed Waste (hazardous and radioactive) Generator	
<input type="checkbox"/> Y <input type="checkbox"/> N	4. Treater, Storer or Disposer of Hazardous Waste—Note: A hazardous waste Part B permit is required for these activities.	
<input type="checkbox"/> Y <input type="checkbox"/> N	5. Receives Hazardous Waste from Off-site	
<input type="checkbox"/> Y <input type="checkbox"/> N	6. Recycler of Hazardous Waste	
<input type="checkbox"/>	a.	Recycler who stores prior to recycling
<input type="checkbox"/>	b.	Recycler who does not store prior to recycling
<input type="checkbox"/> Y <input type="checkbox"/> N	7. Exempt Boiler and/or Industrial Furnace—If "Yes", mark all that apply.	
<input type="checkbox"/>	a.	Small Quantity On-site Burner Exemption
<input type="checkbox"/>	b.	Smelting, Melting, and Refining Furnace Exemption

B. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g. D001, D003, F007, U112). Use an additional page if more spaces are needed.

C. Waste Codes for State Regulated (non-Federal) Hazardous Wastes. Please list the waste codes of the State hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 4 of 9)

EPA ID Number

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11. Additional Regulated Waste Activities (NOTE: Refer to your State regulations to determine if a separate permit is required.)

A. Other Waste Activities

<input type="checkbox"/> Y <input type="checkbox"/> N	1. Transporter of Hazardous Waste—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Transporter
	<input type="checkbox"/> b. Transfer Facility (at your site)
<input type="checkbox"/> Y <input type="checkbox"/> N	2. Underground Injection Control
<input type="checkbox"/> Y <input type="checkbox"/> N	3. United States Importer of Hazardous Waste
<input type="checkbox"/> Y <input type="checkbox"/> N	4. Recognized Trader—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Importer
	<input type="checkbox"/> b. Exporter
<input type="checkbox"/> Y <input type="checkbox"/> N	5. Importer/Exporter of Spent Lead-Acid Batteries (SLABs) under 40 CFR 266 Subpart G—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Importer
	<input type="checkbox"/> b. Exporter

B. Universal Waste Activities

<input type="checkbox"/> Y <input type="checkbox"/> N	1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) - If “Yes” mark all that apply. Note: Refer to your State regulations to determine what is regulated.
	<input type="checkbox"/> a. Batteries
	<input type="checkbox"/> b. Pesticides
	<input type="checkbox"/> c. Mercury containing equipment
	<input type="checkbox"/> d. Lamps
	<input type="checkbox"/> e. Other (specify) _____
	<input type="checkbox"/> f. Other (specify) _____
	<input type="checkbox"/> g. Other (specify) _____
<input type="checkbox"/> Y <input type="checkbox"/> N	2. Destination Facility for Universal Waste Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

<input type="checkbox"/> Y <input type="checkbox"/> N	1. Used Oil Transporter—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Transporter
	<input type="checkbox"/> b. Transfer Facility (at your site)
<input type="checkbox"/> Y <input type="checkbox"/> N	2. Used Oil Processor and/or Re-refiner—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Processor
	<input type="checkbox"/> b. Re-refiner
<input type="checkbox"/> Y <input type="checkbox"/> N	3. Off-Specification Used Oil Burner
<input type="checkbox"/> Y <input type="checkbox"/> N	4. Used Oil Fuel Marketer—If “Yes”, mark all that apply.
	<input type="checkbox"/> a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
	<input type="checkbox"/> b. Marketer Who First Claims the Used Oil Meets the Specifications

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 5 of 9)

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12. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR 262 Subpart K.

<input type="checkbox"/> Y <input type="checkbox"/> N	A. Opting into or currently operating under 40 CFR 262 Subpart K for the management of hazardous wastes in laboratories—If “Yes”, mark all that apply. Note: See the item-by-item instructions for definitions of types of eligible academic entities.
<input type="checkbox"/>	1. College or University
<input type="checkbox"/>	2. Teaching Hospital that is owned by or has a formal written affiliation with a college or university
<input type="checkbox"/>	3. Non-profit Institute that is owned by or has a formal written affiliation with a college or univer-
<input type="checkbox"/> Y <input type="checkbox"/> N	B. Withdrawing from 40 CFR 262 Subpart K for the management of hazardous wastes in laboratories.

13. Episodic Generation

<input type="checkbox"/> Y <input type="checkbox"/> N	Are you an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves you to a higher generator category. If “Yes”, you must fill out the Addendum for Episodic Generator.
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14. LQG Consolidation of VSQG Hazardous Waste

<input type="checkbox"/> Y <input type="checkbox"/> N	Are you an LQG notifying of consolidating VSQG Hazardous Waste Under the Control of the Same Person pursuant to 40 CFR 262.17(f)? If “Yes”, you must fill out the Addendum for LQG Consolidation of VSQGs hazardous waste.
---	--

15. Notification of LQG Site Closure for a Central Accumulation Area (CAA) (optional) OR Entire Facility (required)

<input type="checkbox"/> Y <input type="checkbox"/> N	LQG Site Closure of a Central Accumulation Area (CAA) or Entire Facility.
A. <input type="checkbox"/> Central Accumulation Area (CAA) <input type="checkbox"/> Entire Facility	
B. Expected closure date: _____ mm/dd/yyyy	
C. Requesting new closure date: _____ mm/dd/yyyy	
D. Date closed : _____ mm/dd/yyyy	
<input type="checkbox"/>	1. In compliance with the closure performance standards 40 CFR 262.17(a)(8)
<input type="checkbox"/>	2. Not in compliance with the closure performance standards 40 CFR 262.17(a)(8)

16. Notification of Hazardous Secondary Material (HSM) Activity

<input type="checkbox"/> Y <input type="checkbox"/> N	A. Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 260.30, 40 CFR 261.4(a)(23), (24), or (27)? If “Yes”, you must fill out the Addendum to the Site Identification Form for Managing Hazardous Secondary Material.
<input type="checkbox"/> Y <input type="checkbox"/> N	B. Are you notifying under 40 CFR 260.43(a)(4)(iii) that the product of your recycling process has levels of hazardous constituents that are not comparable to or unable to be compared to a legitimate product or intermediate but that the recycling is still legitimate? If “Yes”, you may provide explanation in Comments section. You must also document that your recycling is still legitimate and maintain that documentation on site.

17. Electronic Manifest Broker


<input type="checkbox"/> Y <input type="checkbox"/> N	Are you notifying as a person, as defined in 40 CFR 260.10, electing to use the EPA electronic manifest system to obtain, complete, and transmit an electronic manifest under a contractual relationship with a hazardous waste generator?
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APPENDIX IV
Notification of Hazardous Waste Activity Form (page 8 of 9)

EPA ID Number

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OMB# 2050-0024; Expires 05/31/2020

ADDENDUM TO THE SITE IDENTIFICATION FORM: EPISODIC GENERATOR	
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ONLY fill out this form if:

- You are an SQG or VSQG generating hazardous waste from a planned or unplanned episodic event, lasting no more than 60 days, that moves the generator to a higher generator category pursuant to 40 CFR 262 Subpart L.
 Note: Only one planned and one unplanned episodic event are allowed within one year; otherwise, you must follow the requirements of the higher generator category. Use additional pages if more space is needed.

Episodic Event	
1. Planned <input type="checkbox"/> Excess chemical inventory removal <input type="checkbox"/> Tank cleanouts <input type="checkbox"/> Short-term construction or demolition <input type="checkbox"/> Equipment maintenance during plant shutdowns <input type="checkbox"/> Other _____	2. Unplanned <input type="checkbox"/> Accidental spills <input type="checkbox"/> Production process upsets <input type="checkbox"/> Product recalls <input type="checkbox"/> "Acts of nature" (Tornado, hurricane, flood, etc.) <input type="checkbox"/> Other _____
3. Emergency Contact Phone _____	4. Emergency Contact Name _____
5. Beginning Date _____ (mm/dd/yyyy)	6. End Date _____ (mm/dd/yyyy)

Waste 1

7. Waste Description	8. Estimated Quantity (in pounds)
9. Federal and/or State Hazardous Waste Codes	

Waste 2

7. Waste Description	8. Estimated Quantity (in pounds)
9. Federal and/or State Hazardous Waste Codes	

Waste 3


7. Waste Description	8. Estimated Quantity (in pounds)
9. Federal and/or State Hazardous Waste Codes	

APPENDIX IV
Notification of Hazardous Waste Activity Form (page 9 of 9)

EPA ID Number

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OMB# 2050-0024; Expires 05/31/2020

<p>ADDENDUM TO THE SITE IDENTIFICATION FORM: LQG CONSOLIDATION OF VSQG HAZARDOUS WASTE</p>	
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ONLY fill out this form if:

- You are an LQG receiving hazardous waste from VSQGs under the control of the same person. Use additional pages if more space is needed.

VSQG 1		
1. EPA ID Number (if assigned)	2. Name	
3. Street Address		
4. City, Town, or Village	5. State	6. Zip Code
7. Contact Phone Number	8. Contact Name	
9. Email		

VSQG 2		
1. EPA ID Number (if assigned)	2. Name	
3. Street Address		
4. City, Town, or Village	5. State	6. Zip Code
7. Contact Phone Number	8. Contact Name	
9. Email		

VSQG 3		
1. EPA ID Number (if assigned)	2. Name	
3. Street Address		
4. City, Town, or Village	5. State	6. Zip Code
7. Contact Phone Number	8. Contact Name	
9. Email		

APPENDIX V

Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310B)

Note: The extraction procedure (EP), method 1310B, is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", environmental protection agency publication SW-846, as incorporated by reference in section 33.1-24-01-05.

APPENDIX VI

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>Acetaldol</u>	<u>107-89-1</u>
<u>Acetamide</u>	<u>60-35-5</u>
<u>2-Acetylaminofluorene</u>	<u>53-96-3</u>
<u>3-Acetyl-5-hydroxypiperidine</u>	
<u>3-Acetylpiperidine</u>	<u>618-42-8</u>
<u>1-Acetyl-2-thiourea</u>	<u>591-08-2</u>
<u>Acrylamide</u>	<u>79-06-1</u>
<u>Acrylic acid</u>	<u>79-10-7</u>
<u>Adenine</u>	<u>73-24-5</u>
<u>Adipic acid</u>	<u>124-04-9</u>
<u>Adiponitrile</u>	<u>111-69-3</u>
<u>Alachlor</u>	<u>15972-60-8</u>
<u>Aldicarb</u>	<u>116-06-3</u>
<u>Ametryn</u>	<u>834-12-8</u>
<u>4-Aminobiphenyl</u>	<u>92-67-1</u>
<u>4-Aminopyridine</u>	<u>504-24-5</u>
<u>Aniline</u>	<u>62-53-3</u>
<u>o-Anisidine</u>	<u>90-04-0</u>
<u>Anthraquinone</u>	<u>84-65-1</u>
<u>Atrazine</u>	<u>1912-24-9</u>
<u>Benzeneearsonic acid</u>	<u>98-05-5</u>
<u>Benzenesulfonic acid</u>	<u>98-11-3</u>
<u>Benzidine</u>	<u>92-87-5</u>
<u>Benzo(a)anthracene</u>	<u>56-55-3</u>
<u>Benzo(k)fluoranthene</u>	<u>207-08-9</u>
<u>Benzoic acid</u>	<u>65-85-0</u>
<u>Benzo(g,h,i)perylene</u>	<u>191-24-2</u>
<u>Benzo(a)pyrene</u>	<u>50-32-8</u>
<u>Benzyl alcohol</u>	<u>100-51-6</u>
<u>gamma-BHC</u>	<u>58-89-9</u>
<u>Bis(2-ethylhexyl)phthalate</u>	<u>117-81-7</u>
<u>Bromochloromethyl acetate</u>	
<u>Bromoxynil</u>	<u>1689-84-5</u>

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>Butyric acid</u>	<u>107-92-6</u>
<u>Caprolactam (hexahydro-2H-azepin-2-one)</u>	<u>105-60-2</u>
<u>Catechol (o-dihydroxybenzene)</u>	<u>120-80-9</u>
<u>Cellulose</u>	<u>9004-34-6</u>
<u>Cell wall</u>	
<u>Chlorhydrin (3-Chloro-1,2-propanediol)</u>	<u>96-24-2</u>
<u>Chloroacetic acid</u>	<u>79-11-8</u>
<u>2-Chloroacetophenone</u>	<u>93-76-5</u>
<u>p-Chloroaniline</u>	<u>106-47-8</u>
<u>p-Chlorobenzophenone</u>	<u>134-85-0</u>
<u>Chlorobenzilate</u>	<u>510-15-6</u>
<u>p-Chloro-m-cresol (6-chloro-m-cresol)</u>	<u>59-50-7</u>
<u>3-Chloro-2,5-diketopyrrolidine</u>	
<u>Chloro-1,2-ethane diol</u>	
<u>4-Chlorophenol</u>	<u>106-48-9</u>
<u>Chlorophenol polymers (2-chlorophenol & 4-chlorophenol)</u>	<u>95-57-8 & 106-48-9</u>
<u>1-(o-Chlorophenyl)thiourea</u>	<u>5344-82-1</u>
<u>Chrysene</u>	<u>218-01-9</u>
<u>Citric acid</u>	<u>77-92-9</u>
<u>Creosote</u>	<u>8001-58-9</u>
<u>m-Cresol</u>	<u>108-39-4</u>
<u>o-Cresol</u>	<u>95-48-7</u>
<u>p-Cresol</u>	<u>106-44-5</u>
<u>Cresol (mixed isomers)</u>	<u>1319-77-3</u>
<u>4-Cumylphenol</u>	<u>27576-86</u>
<u>Cyanide</u>	<u>57-12-5</u>
<u>4-Cyanomethyl benzoate</u>	
<u>Diazinon</u>	<u>333-41-5</u>
<u>Dibenzo(a,h)anthracene</u>	<u>53-70-3</u>
<u>Dibutylphthalate</u>	<u>84-74-2</u>
<u>2,5-Dichloroaniline (N,N'-dichloroaniline)</u>	<u>95-82-9</u>
<u>2,6-Dichlorobenzonitrile¹¹</u>	<u>1194-65-6</u>
<u>2,6-Dichloro-4-nitroaniline</u>	<u>99-30-9</u>
<u>2,5-Dichlorophenol</u>	<u>333-41-5</u>
<u>3,4-Dichlorotetrahydrofuran</u>	

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>Dichlorvos (DDVP)</u>	<u>62-73-7</u>
<u>Diethanolamine</u>	<u>111-42-2</u>
<u>N,N-Diethylaniline</u>	<u>91-66-7</u>
<u>Diethylene glycol</u>	<u>111-46-6</u>
<u>Diethylene glycol dimethyl ether (dimethyl Carbitol)</u>	<u>111-96-6</u>
<u>Diethylene glycol monobutyl ether (butyl Carbitol)</u>	<u>112-34-5</u>
<u>Diethylene glycol monoethyl ether acetate (Carbitol acetate)</u>	<u>112-15-2</u>
<u>Diethylene glycol monoethyl ether (Carbitol Cellosolve)</u>	<u>111-90-0</u>
<u>Diethylene glycol monomethyl ether (methyl Carbitol)</u>	<u>111-77-3</u>
<u>N,N'-Diethylhydrazine</u>	<u>1615-80-1</u>
<u>Diethyl (4-methylumbelliferyl) thionophosphate</u>	<u>299-45-6</u>
<u>Diethyl phosphorothioate</u>	<u>126-75-0</u>
<u>N,N'-Diethylpropionamide</u>	<u>15299-99-7</u>
<u>Dimethoate</u>	<u>60-51-5</u>
<u>2,3-Dimethoxystrychnidin-10-one</u>	<u>357-57-3</u>
<u>4-Dimethylaminoazobenzene</u>	<u>60-11-7</u>
<u>7,12-Dimethylbenz(a)anthracene</u>	<u>57-97-6</u>
<u>3,3-Dimethylbenzidine</u>	<u>119-93-7</u>
<u>Dimethylcarbamoyl chloride</u>	<u>79-44-7</u>
<u>Dimethyldisulfide</u>	<u>624-92-0</u>
<u>Dimethylformamide</u>	<u>68-12-2</u>
<u>1,1-Dimethylhydrazine</u>	<u>57-14-7</u>
<u>Dimethylphthalate</u>	<u>131-11-3</u>
<u>Dimethylsulfone</u>	<u>67-71-0</u>
<u>Dimethylsulfoxide</u>	<u>67-68-5</u>
<u>4,6-Dinitro-o-cresol</u>	<u>534-52-1</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>
<u>Dipropylene glycol (1,1'-oxydi-2-propanol)</u>	<u>110-98-5</u>
<u>Endrin</u>	<u>72-20-8</u>
<u>Epinephrine</u>	<u>51-43-4</u>
<u>mono-Ethanolamine</u>	<u>141-43-5</u>
<u>Ethyl carbamate (urethane)</u>	<u>5-17-96</u>
<u>Ethylene glycol</u>	<u>107-21-1</u>
<u>Ethylene glycol monobutyl ether (butyl Cellosolve)</u>	<u>111-76-2</u>
<u>Ethylene glycol monoethyl ether (Cellosolve)</u>	<u>110-80-5</u>

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>Ethylene glycol monoethyl ether acetate (Cellosolve acetate)</u>	<u>111-15-9</u>
<u>Ethylene glycol monomethyl ether (methyl Cellosolve)</u>	<u>109-86-4</u>
<u>Ethylene glycol monophenyl ether (phenyl Cellosolve)</u>	<u>122-99-6</u>
<u>Ethylene glycol monopropyl ether (propyl Cellosolve)</u>	<u>2807-30-9</u>
<u>Ethylene thiourea (2-imidazolidinethione)</u>	<u>96-45-7</u>
<u>4-Ethylmorpholine</u>	<u>100-74-3</u>
<u>3-Ethylphenol</u>	<u>620-17-7</u>
<u>Fluoroacetic acid, sodium salt</u>	<u>62-74-8</u>
<u>Formaldehyde</u>	<u>50-00-0</u>
<u>Formamide</u>	<u>75-12-7</u>
<u>Formic acid</u>	<u>64-18-6</u>
<u>Fumaric acid</u>	<u>110-17-8</u>
<u>Glutaric acid</u>	<u>110-94-1</u>
<u>Glycerin (Glycerol)</u>	<u>56-81-5</u>
<u>Glycidol</u>	<u>556-52-5</u>
<u>Glycinamide</u>	<u>598-41-4</u>
<u>Glyphosate</u>	<u>1071-83-6</u>
<u>Guthion</u>	<u>86-50-0</u>
<u>Hexamethylene-1,6-diisocyanate (1,6-diisocyanatohexane)</u>	<u>822-06-0</u>
<u>Hexamethyl phosphoramidate</u>	<u>680-31-9</u>
<u>Hexanoic acid</u>	<u>142-62-1</u>
<u>Hydrazine</u>	<u>302-01-2</u>
<u>Hydrocyanic acid</u>	<u>74-90-8</u>
<u>Hydroquinone</u>	<u>123-31-9</u>
<u>Hydroxy-2-propionitrile (hydracrylonitrile)</u>	<u>109-78-4</u>
<u>Indeno (1,2,3-cd) pyrene</u>	<u>193-39-5</u>
<u>Lead acetate</u>	<u>301-04-2</u>
<u>Lead subacetate (lead acetate, monobasic)</u>	<u>1335-32-6</u>
<u>Leucine</u>	<u>61-90-5</u>
<u>Malathion</u>	<u>121-75-5</u>
<u>Maleic acid</u>	<u>110-16-7</u>
<u>Maleic anhydride</u>	<u>108-31-6</u>
<u>Mesityl oxide</u>	<u>141-79-7</u>
<u>Methane sulfonic acid</u>	<u>75-75-2</u>
<u>Methomyl</u>	<u>16752-77-5</u>

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>p-Methoxyphenol</u>	<u>150-76-5</u>
<u>Methyl acrylate</u>	<u>96-33-3</u>
<u>4,4'-Methylene-bis-(2-chloroaniline)</u>	<u>101-14-4</u>
<u>4,4'-Methylenediphenyl diisocyanate (diphenyl methane diisocyanate)</u>	<u>101-68-8</u>
<u>4,4'-Methylenedianiline</u>	<u>101-77-9</u>
<u>Methylene diphenylamine (MDA)</u>	
<u>5-Methylfurfural</u>	<u>620-02-0</u>
<u>Methylhydrazine</u>	<u>60-34-4</u>
<u>Methyliminoacetic acid</u>	
<u>Methyl methane sulfonate</u>	<u>66-27-3</u>
<u>1-Methyl-2-methoxyaziridine</u>	
<u>Methylparathion</u>	<u>298-00-0</u>
<u>Methyl sulfuric acid (sulfuric acid, dimethyl ester)</u>	<u>77-78-1</u>
<u>4-Methylthiophenol</u>	<u>106-45-6</u>
<u>Monomethylformamide (N-methylformamide)</u>	<u>123-39-7</u>
<u>Nabam</u>	<u>142-59-6</u>
<u>alpha-Naphthol</u>	<u>90-15-3</u>
<u>beta-Naphthol</u>	<u>135-19-3</u>
<u>alpha-Naphthylamine</u>	<u>134-32-7</u>
<u>beta-Naphthylamine</u>	<u>91-59-8</u>
<u>Neopentyl glycol (dimethylolpropane)</u>	<u>126-30-7</u>
<u>Niacinamide</u>	<u>98-92-0</u>
<u>o-Nitroaniline</u>	<u>88-74-4</u>
<u>Nitroglycerin</u>	<u>55-63-0</u>
<u>2-Nitrophenol</u>	<u>88-75-5</u>
<u>4-Nitrophenol</u>	<u>100-02-7</u>
<u>N-Nitrosodimethylamine</u>	<u>62-75-9</u>
<u>Nitrosoguanidine</u>	<u>674-81-7</u>
<u>N-Nitroso-n-methylurea</u>	<u>684-93-5</u>
<u>N-Nitrosomorpholine (4-nitrosomorpholine)</u>	<u>59-89-2</u>
<u>Oxalic acid</u>	<u>144-62-7</u>
<u>Parathion</u>	<u>56-38-2</u>
<u>Pentaerythritol</u>	<u>115-77-5</u>
<u>Phenacetin</u>	<u>62-44-2</u>
<u>Phenol</u>	<u>108-95-2</u>

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>Phenylacetic acid</u>	<u>103-82-2</u>
<u>m-Phenylene diamine</u>	<u>108-45-2</u>
<u>o-Phenylene diamine</u>	<u>95-54-5</u>
<u>p-Phenylene diamine</u>	<u>106-50-3</u>
<u>Phenyl mercuric acetate</u>	<u>62-38-4</u>
<u>Phorate</u>	<u>298-02-2</u>
<u>Phthalic anhydride</u>	<u>85-44-9</u>
<u>alpha-Picoline (2-methyl pyridine)</u>	<u>109-06-8</u>
<u>1,3-Propane sultone</u>	<u>1120-71-4</u>
<u>beta-Propiolactone</u>	<u>57-57-8</u>
<u>Proporur (Baygon)</u>	
<u>Propylene glycol</u>	<u>57-55-6</u>
<u>Pyrene</u>	<u>129-00-0</u>
<u>Pyridinium bromide</u>	<u>39416-48-3</u>
<u>Quinoline</u>	<u>91-22-5</u>
<u>Quinone (p-benzoquinone)</u>	<u>106-51-4</u>
<u>Resorcinol</u>	<u>108-46-3</u>
<u>Simazine</u>	<u>122-34-9</u>
<u>Sodium acetate</u>	<u>127-09-3</u>
<u>Sodium formate</u>	<u>141-53-7</u>
<u>Strychnine</u>	<u>57-24-9</u>
<u>Succinic acid</u>	<u>110-15-6</u>
<u>Succinimide</u>	<u>123-56-8</u>
<u>Sulfanilic acid</u>	<u>121-47-1</u>
<u>Terephthalic acid</u>	<u>100-21-0</u>
<u>Tetraethyldithiopyrophosphate</u>	<u>3689-24-5</u>
<u>Tetraethylenepentamine</u>	<u>112-57-2</u>
<u>Thiofanox</u>	<u>39196-18-4</u>
<u>Thiosemicarbazide</u>	<u>79-19-6</u>
<u>2,4-Toluenediamine</u>	<u>95-80-7</u>
<u>2,6-Toluenediamine</u>	<u>823-40-5</u>
<u>3,4-Toluenediamine</u>	<u>496-72-0</u>
<u>2,4-Toluene diisocyanate</u>	<u>584-84-9</u>
<u>p-Toluic acid</u>	<u>99-94-5</u>
<u>m-Toluidine</u>	<u>108-44-1</u>

Compounds With Henry's Law Constant Less Than 0.1 Y/X

<u>Compound name</u>	<u>CAS No.</u>
<u>1,1,2-Trichloro-1,2,2-trifluoroethane</u>	<u>76-13-1</u>
<u>Triethanolamine</u>	<u>102-71-6</u>
<u>Triethylene glycol dimethyl ether</u>	
<u>Tripropylene glycol</u>	<u>24800-44-0</u>
<u>Warfarin</u>	<u>81-81-2</u>
<u>3,4-Xylenol (3,4-dimethylphenol)</u>	<u>95-65-8</u>

APPENDIX VII
List of Halogenated Organic Compounds Regulated Under
Section 33.1-24-05-272

In determining the concentration of HOCs in a hazardous waste for purposes of the section 33.1-24-05-272 land disposal prohibition, the department has defined the HOCs that must be included in the calculation as any compounds having a carbon-halogen bond which are listed in this Appendix (see Section 33.1-24-05-251). Appendix VII consists of the following compounds:

I. Volatiles

Bromodichloromethane
Bromomethane
Carbon Tetrachloride
Chlorobenzene
2-Chloro-1,3-butadiene
Chlorodibromomethane
Chloroethane
2-Chloroethyl vinyl ether
Chloroform
Chloromethane
3-Chloropropene
1,2-Dibromo-3-chloropropane
1,2-Dibromomethane
Dibromomethane
Trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
Trans-1,2-Dichloroethene
1,2-Dichloropropane
Trans-1,3-Dichloropropene
cis-1,3-Dichloropropene
Iodomethane
Methylene chloride
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Tribromomethane
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichloromonofluoromethane
1,2,3-Trichloropropane
Vinyl Chloride

II. Semivolatiles

Bis(2-chloroethoxy)ethane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
p-Chloroaniline
Chlorobenzilate
P-Chloro-m-cresol
2-Chloronaphthalene
2-Chlorophenol
3-Chloropropionitrile
m-Dichlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Hexachloropropene
4,4'-Methylenebis(2-chloroaniline)
Pentachlorobenzene
Pentachloroethane
Pentachloronitrobenzene
Pentachlorophenol
Pronamide
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
Tris(2,3-dibromopropyl)phosphate

APPENDIX VII (continued)

List of Halogenated Organic Compounds Regulated Under Section 33.1-24-05-272

III. Organochlorine Pesticides

Aldrin
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC
Chlorodane
DDD
DDE
DDT
Dieldrin
Endosulfan I
Endosulfan II
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Isodrin
Kepone
Methoxychlor
Toxaphene

IV. Phenoxyacetic Acid Herbicides

2,4-Dichlorophenoxyacetic acid
Silvex
2,4,5-T

V. PCBs

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
PCBs not otherwise specified

VI. Dioxins and Furans

Hexachlorodibenzo-p-dioxins
Hexachlorodibenzofuran
Pentachlorodibenzo-p-dioxins
Pentachlorodibenzofuran
Tetrachlorodibenzo-p-dioxins
Tetrachlorodibenzofuran
2,3,7,8-Tetrachlorodibenzo-p-dioxin

APPENDIX VIII

Wastes Excluded From Lab Packs
Under the Alternative Treatment Standards of Subsection 3 of
Section 33.1-24-05-282

Hazardous waste with the following hazardous waste codes may not be placed in lab packs under the alternative lab pack treatment standards of subsection 3 of section 33.1-24-05-282: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, and U151.

APPENDIX IX

[Reserved]

APPENDIX X

**Recommended Technologies to Achieve Deactivation
of Characteristics in Section 33.1-24-05-282**

The treatment standard for many characteristic wastes is stated in the 33.1-24-05-280 Table of Treatment Standards as "Deactivation and meet UTS." The environmental protection agency has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act or in a Clean Water Act-equivalent facility, and that also contain underlying hazardous constituents (see subsection 10 of section 33.1-24-05-251) must be treated not only by a "deactivating" technology to remove the characteristic, but also to achieve the universal treatment standards for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in Table 1 of section 33.1-24-05-282, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, or the use or any combination thereof, of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the universal treatment standards.

<u>Waste Code/Subcategory</u>	<u>Nonwastewaters</u>	<u>Wastewaters</u>
<u>D001 Ignitable Liquids based on 33.1-24-02-11.1.a.-Low TOC</u>	<u>RORGS.....</u>	<u>n.a.</u>
<u>Nonwastewater Subcategory (containing 1% to <10% TOC).</u>	<u>INCIN.....</u>	
	<u>WETOX.....</u>	
	<u>CHOXD.....</u>	
	<u>BIODG.....</u>	
<u>D001 Ignitable Liquids based on 33.1-24-02-11.1.a.-Ignitable</u>	<u>n.a.....</u>	<u>RORGS</u>
<u>Wastewater Subcategory(containing <1% TOC).</u>		<u>INCIN</u>
		<u>WETOX</u>
		<u>CHOXD</u>
		<u>BIODG</u>
<u>D001 Compressed Gases based on 33.1-24-02-11.1.c.....</u>	<u>RCGAS.....</u>	<u>n.a.</u>
	<u>INCIN.....</u>	
	<u>FSUBS.....</u>	
	<u>ADGAS fb. INCIN.....</u>	
	<u>ADGAS fb. (CHOXD; or CHRED).</u>	
<u>D001 Ignitable Reactives based on 33.1-24-02-11.1.b.....</u>	<u>WTRRX.....</u>	<u>n.a.</u>
	<u>CHOXD.....</u>	
	<u>CHRED.....</u>	
	<u>STABL.....</u>	
	<u>INCIN.....</u>	
<u>D001 Ignitable Oxidizers based on 33.1-24-02-11.1.d.....</u>	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>INCIN</u>
<u>D002 Acid Subcategory based on 33.1-24-02-12.1.a. with pH</u>	<u>RCORR.....</u>	<u>NEUTR</u>
<u>less than or equal to 2</u>	<u>NEUTR.....</u>	<u>INCIN</u>
	<u>INCIN.....</u>	

<u>Waste Code/Subcategory</u>	<u>Nonwastewaters</u>	<u>Wastewaters</u>
<u>D002 Alkaline Subcategory based on 33.1-24-02-12.1.a. with pH greater than or equal to 12.5</u>	<u>NEUTR.....</u>	<u>NEUTR</u>
	<u>INCIN.....</u>	<u>INCIN</u>
<u>D002 Other Corrosives based on 33.1-24-02-12.1.b.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>INCIN</u>
	<u>STABL.....</u>	
<u>D003 Water Reactives based on 33.1-24-02-13.1.b., c., and d.....</u>	<u>INCIN.....</u>	<u>n.a.</u>
	<u>WTRRX</u>	
	<u>CHOXD.....</u>	
	<u>CHRED.....</u>	
<u>D003 Reactive Sulfides based on 33.1-24-02-13.1.e.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
	<u>STABL.....</u>	<u>INCIN</u>
<u>D003 Explosives based on 33.1-24-02-13.1.f., g., and h.....</u>	<u>INCIN.....</u>	<u>INCIN</u>
	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
		<u>BIODG</u>
		<u>CARBN</u>
<u>D003 Other Reactives based on 33.1-24-02-13.1.a.....</u>	<u>INCIN.....</u>	<u>INCIN</u>
	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
		<u>BIODG</u>
		<u>CARBN</u>
<u>K044 Wastewater treatment sludges from the manufacturing and processing of explosives.</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
		<u>CARBN</u>
		<u>INCIN</u>
<u>K045 Spent carbon from the treatment of wastewaters containing explosives.</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
		<u>CARBN</u>
		<u>INCIN</u>
<u>K047 Pink/red water from TNT operations.....</u>	<u>CHOXD.....</u>	<u>CHOXD</u>
	<u>CHRED.....</u>	<u>CHRED</u>
	<u>INCIN.....</u>	<u>BIODG</u>
		<u>CARBN</u>
		<u>INCIN</u>

Note: "n.a." stands for "not applicable;" "fb." stands for "followed by."

APPENDIX XI

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
D001 ^c	All (except high total organic carbon ignitable liquids)	August 9, 1993
D001	High total organic carbon ignitable liquids	August 8, 1990
D002 ^c	All	August 9, 1993
D003	Newly identified surface-disposed elemental phosphorus processing wastes	May 26, 2000
D004	Newly identified D004 and mineral processing wastes	August 24, 1998
D004	Mixed radioactive/newly identified D004 or mineral processing wastes	May 26, 2000
D005	Newly identified D005 and mineral processing wastes	August 24, 1998
D005	Mixed radioactive/newly identified D005 or mineral processing wastes	May 26, 2000
D006	Newly identified D006 and mineral processing wastes	August 24, 1998
D006	Mixed radioactive/newly identified D006 or mineral processing wastes	May 26, 2000
D007	Newly identified D007 and mineral processing wastes	August 24, 1998
D007	Mixed radioactive/newly identified D007 or mineral processing wastes	May 26, 2000
D008	Newly identified D008 and mineral processing wastes	August 24, 1998
D008	Mixed radioactive/newly identified D008 or mineral processing wastes	May 26, 2000
D009	Newly identified D009 and mineral processing wastes	August 24, 1998
D009	Mixed radioactive/newly identified D009 or mineral processing wastes	May 26, 2000
D010	Newly identified D010 and mineral processing wastes	August 24, 1998
D010	Mixed radioactive/newly identified D010 or mineral processing wastes	May 26, 2000
D011	Newly identified D011 and mineral processing wastes	August 24, 1998
D011	Mixed radioactive/newly identified D011 or mineral processing wastes	May 26, 2000
D012 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994
D013 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994
D014 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
D015 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994
D016 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994
D017 (that exhibit the toxicity characteristic based on the TCLP) ^d	All	December 14, 1994
<u>D018</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D018</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D019</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D019</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D020</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D020</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D021</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D021</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D022</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D022</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D023</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D023</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D024</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D024</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D025</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D025</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D026</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D026</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D027</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D027</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D028</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D028</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D029</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D029</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D030</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D030</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D031</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D031</u>	<u>All others</u>	<u>December 19, 1994</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>D032</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D032</u>	<u>All others</u>	<u>December 19, 1996</u>
<u>D033</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D033</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D034</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D034</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D035</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D035</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D036</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D036</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D037</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D037</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D038</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D038</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D039</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D039</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D040</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D040</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D041</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D041</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D042</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D042</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>D043</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>D043</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>F001</u>	<u>Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids</u>	<u>November 8, 1988</u>
<u>F001</u>	<u>All others</u>	<u>November 8, 1986</u>
<u>F002 (1,1,2-trichloroethane)</u>	<u>Wastewater and nonwastewater</u>	<u>August 8, 1990</u>
<u>F002</u>	<u>Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids</u>	<u>November 8, 1988</u>
<u>F002</u>	<u>All others</u>	<u>November 8, 1986</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F003	All others	November 8, 1986
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F004	All others	November 8, 1986
F005 (benzene, 2-ethoxy ethanol, 2-nitropropane)	Wastewater and nonwastewater	August 8, 1990
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	November 8, 1988
F005	All others	November 8, 1986
F006	Wastewater	August 8, 1990
F006	Nonwastewater	August 8, 1988
F006 (cyanides)	Nonwastewater	July 8, 1989
F007	All	July 8, 1989
F008	All	July 8, 1989
F009	All	July 8, 1989
F010	All	June 8, 1989
F011 (cyanides)	Nonwastewater	December 8, 1989
F011	All others	July 8, 1989
F012 (cyanides)	Nonwastewater	December 8, 1989
F012	All others	July 8, 1989
F019	All	August 8, 1990
F020	All	November 8, 1988
F021	All	November 8, 1988
F025	All	August 8, 1990
F026	All	November 8, 1988
F027	All	November 8, 1988
F028	All	November 8, 1988
F032	Mixed with radioactive wastes	May 12, 1999
F032	All others	August 12, 1997
F034	Mixed with radioactive wastes	May 12, 1999

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>F034</u>	<u>All others</u>	<u>August 12, 1997</u>
<u>F035</u>	<u>Mixed with radioactive wastes</u>	<u>May 12, 1999</u>
<u>F035</u>	<u>All others</u>	<u>August 12, 1997</u>
<u>F037</u>	<u>Not generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1993</u>
<u>F037</u>	<u>Generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1994</u>
<u>F037</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>F038</u>	<u>Not generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1993</u>
<u>F038</u>	<u>Generated from surface impoundment cleanouts or closures</u>	<u>June 30, 1994</u>
<u>F038</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>F039</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>F039</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K001 (organics)^b</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K001</u>	<u>All others</u>	<u>August 8, 1988</u>
<u>K002</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K003</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K004</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K004</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K005</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K005</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K006</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K007</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K007</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K008</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K008</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K009</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K010</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K011</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K011</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K013</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K013</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K014</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K014</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K015</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K015</u>	<u>Nonwastewater</u>	<u>August 8, 1990</u>
<u>K016</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K017</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K018</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K019</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K020</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K021</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K021</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K022</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K022</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K023</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K024</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K025</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K025</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K026</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K027</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K028 (metals)</u>	<u>Nonwastewater</u>	<u>August 8, 1990</u>
<u>K028</u>	<u>All others</u>	<u>June 8, 1989</u>
<u>K029</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K029</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K030</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K031</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K031</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K032</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K033</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K034</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K035</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K036</u>	<u>Wastewater</u>	<u>June 8, 1989</u>
<u>K036</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K037^b</u>	<u>Wastewater</u>	<u>August 8, 1988</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K037</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K038</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K039</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K040</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K041</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K042</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K043</u>	<u>all</u>	<u>June 8, 1989</u>
<u>K044</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K045</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K046 (nonreactive)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K046</u>	<u>All others</u>	<u>August 8, 1990</u>
<u>K047</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K048</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K048</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K049</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K049</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K050</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K050</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K051</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K051</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K052</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K052</u>	<u>Nonwastewater</u>	<u>November 8, 1990</u>
<u>K060</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K060</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K061</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K061</u>	<u>Nonwastewater</u>	<u>June 30, 1992</u>
<u>K062</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K069 (non-calcium sulfate)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K069</u>	<u>All others</u>	<u>August 8, 1990</u>
<u>K071</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K073</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K083</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K084</u>	<u>Wastewater</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K084</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K085</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K086 (organics)^b</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K086</u>	<u>All others</u>	<u>August 8, 1988</u>
<u>K087</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K088</u>	<u>All others</u>	<u>October 8, 1997</u>
<u>K088</u>	<u>All others</u>	<u>January 8, 1997</u>
<u>K093</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K094</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K095</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K095</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K096</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K096</u>	<u>Nonwastewater</u>	<u>June 8, 1989</u>
<u>K097</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K098</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K099</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K100</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K100</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K101 (organics)</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K101 (metals)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K101 (organics)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K101 (metals)</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K102 (organics)</u>	<u>Wastewater</u>	<u>August 8, 1988</u>
<u>K102 (metals)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K102 (organics)</u>	<u>Nonwastewater</u>	<u>August 8, 1988</u>
<u>K102 (metals)</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K103</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K104</u>	<u>All</u>	<u>August 8, 1988</u>
<u>K105</u>	<u>All</u>	<u>August 8, 1990</u>
<u>K106</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>K106</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>K107</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K107</u>	<u>All others</u>	<u>November 9, 1992</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K108</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K108</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K109</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K109</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K110</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K110</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K111</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K111</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K112</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K112</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K113</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K114</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K115</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K116</u>	<u>All</u>	<u>June 8, 1989</u>
<u>K117</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K117</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K118</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K118</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K123</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K123</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K124</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K124</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K125</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K125</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K126</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K126</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K131</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K131</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K132</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K132</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K136</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>K136</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>K141</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K141</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K142</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K142</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K143</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K143</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K144</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K144</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K145</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K145</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K147</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K147</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K148</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K148</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K149</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K149</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K150</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K150</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K151</u>	<u>Mixed with radioactive wastes</u>	<u>September 19, 1996</u>
<u>K151</u>	<u>All others</u>	<u>December 19, 1994</u>
<u>K156</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K156</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K157</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K157</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K158</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K158</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K159</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K159</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K160</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K160</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>K161</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>K161</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P001</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P002</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>P003</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P004</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P005</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P006</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P007</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P008</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P009</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P010</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P010</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>P011</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P011</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>P012</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P012</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>P013 (barium)</u>	<u>Nonwastewater</u>	<u>August 8, 1990</u>
<u>P013</u>	<u>All others</u>	<u>June 8, 1989</u>
<u>P014</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P015</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P016</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P017</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P018</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P020</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P021</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P022</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P023</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P024</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P026</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P027</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P028</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P029</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P030</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P031</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P033</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P034</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
P036	Wastewater	August 8, 1990
P036	Nonwastewater	May 8, 1992
P037	All	August 8, 1990
P038	Wastewater	August 8, 1990
P038	Nonwastewater	May 8, 1992
P039	All	June 8, 1989
P040	All	June 8, 1989
P041	All	June 8, 1989
P042	All	August 8, 1990
P043	All	June 8, 1989
P044	All	June 8, 1989
P045	All	August 8, 1990
P046	All	August 8, 1990
P047	All	August 8, 1990
P048	All	August 8, 1990
P049	All	August 8, 1990
P050	All	August 8, 1990
P051	All	August 8, 1990
P054	All	August 8, 1990
P056	All	August 8, 1990
P057	All	August 8, 1990
P058	All	August 8, 1990
P059	All	August 8, 1990
P060	All	August 8, 1990
P062	All	June 8, 1989
P063	All	June 8, 1989
P064	All	August 8, 1990
P065	Wastewater	August 8, 1990
P065	Nonwastewater	May 8, 1992
P066	All	August 8, 1990
P067	All	August 8, 1990
P068	All	August 8, 1990
P069	All	August 8, 1990

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>P070</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P071</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P072</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P073</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P074</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P075</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P076</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P077</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P078</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P081</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P082</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P084</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P085</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P087</u>	<u>All</u>	<u>May 8, 1992</u>
<u>P088</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P089</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P092</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P092</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>P093</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P094</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P095</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P096</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P097</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P098</u>	<u>All</u>	<u>June 8, 1989</u>
<u>P099 (silver)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P099</u>	<u>All others</u>	<u>June 8, 1989</u>
<u>P101</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P102</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P103</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P104 (silver)</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>P104</u>	<u>All others</u>	<u>June 8, 1989</u>
<u>P105</u>	<u>All</u>	<u>August 8, 1990</u>
<u>P106</u>	<u>All</u>	<u>June 8, 1989</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
P108	All	August 8, 1990
P109	All	June 8, 1989
P110	All	August 8, 1990
P111	All	June 8, 1989
P112	All	August 8, 1990
P113	All	August 8, 1990
P114	All	August 8, 1990
P115	All	August 8, 1990
P116	All	August 8, 1990
P118	All	August 8, 1990
P119	All	August 8, 1990
P120	All	August 8, 1990
P121	All	June 8, 1989
P122	All	August 8, 1990
P123	All	August 8, 1990
P127	Mixed with radioactive wastes	April 8, 1998
P127	All others	July 8, 1996
P128	Mixed with radioactive wastes	April 8, 1998
P128	All others	July 8, 1996
P185	Mixed with radioactive wastes	April 8, 1998
P185	All others	July 8, 1996
P188	Mixed with radioactive wastes	April 8, 1998
P188	All others	July 8, 1996
P189	Mixed with radioactive wastes	April 8, 1998
P189	All others	July 8, 1996
P190	Mixed with radioactive wastes	April 8, 1998
P190	All others	July 8, 1996
P191	Mixed with radioactive wastes	April 8, 1998
P191	All others	July 8, 1996
P192	Mixed with radioactive wastes	April 8, 1998
P192	All others	July 8, 1996
P194	Mixed with radioactive wastes	April 8, 1998
P194	All others	July 8, 1996

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>P196</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P196</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P197</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P197</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P198</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P198</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P199</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P199</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P201</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P201</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P202</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P202</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P203</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P203</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P204</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P204</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>P205</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>P205</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U001</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U002</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U003</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U004</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U005</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U006</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U007</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U008</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U009</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U010</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U011</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U012</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U014</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U015</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U016</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U017</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U018</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U019</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U020</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U021</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U022</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U023</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U024</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U025</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U026</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U027</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U028</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U029</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U030</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U031</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U032</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U033</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U034</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U035</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U036</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U037</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U038</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U039</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U041</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U042</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U043</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U044</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U045</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U046</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U047</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U048</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U049</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U050</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U051</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U052</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U053</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U055</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U056</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U057</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U058</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U059</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U060</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U061</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U062</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U063</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U064</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U066</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U067</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U068</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U069</u>	<u>All</u>	<u>June 30, 1992</u>
<u>U070</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U071</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U072</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U073</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U074</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U075</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U076</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U077</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U078</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U079</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U080</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U081</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U082</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U083</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U084</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U085</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U086</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U087</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U088</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U089</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U090</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U091</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U092</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U093</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U094</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U095</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U096</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U097</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U098</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U099</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U101</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U102</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U103</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U105</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U106</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U107</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U108</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U109</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U110</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U111</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U112</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U113</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U114</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U115</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U116</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U117</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U118</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U119</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U120</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U121</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U122</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U123</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U124</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U125</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U126</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U127</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U128</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U129</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U130</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U131</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U132</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U133</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U134</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U135</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U136</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>U136</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>U137</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U138</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U140</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U141</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U142</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U143</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U144</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U145</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U146</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U147</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U148</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U149</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U150</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U151</u>	<u>Wastewater</u>	<u>August 8, 1990</u>
<u>U151</u>	<u>Nonwastewater</u>	<u>May 8, 1992</u>
<u>U152</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U153</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U154</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U155</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U156</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U157</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U158</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U159</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U160</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U161</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U162</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U163</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U164</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U165</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U166</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U167</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U168</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U169</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U170</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U171</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U172</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U173</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U174</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U176</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U177</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U178</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U179</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U180</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U181</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U182</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U183</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U184</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U185</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U186</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U187</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U188</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U189</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U190</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U191</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U192</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U193</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U194</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U196</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U197</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U200</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U201</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U203</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U204</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U205</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U206</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U207</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U208</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U209</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U210</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U211</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U213</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U214</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U215</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U216</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U217</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U218</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U219</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U220</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U221</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U222</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U223</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U225</u>	<u>All</u>	<u>August 8, 1990</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U226</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U227</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U228</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U234</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U235</u>	<u>All</u>	<u>June 8, 1989</u>
<u>U236</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U237</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U238</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U239</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U240</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U243</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U244</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U246</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U247</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U248</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U249</u>	<u>All</u>	<u>August 8, 1990</u>
<u>U271</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U271</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U277</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U277</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U278</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U278</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U279</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U279</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U280</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U280</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U328</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>U328</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>U353</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>U353</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>U359</u>	<u>Mixed with radioactive wastes</u>	<u>June 30, 1994</u>
<u>U359</u>	<u>All others</u>	<u>November 9, 1992</u>
<u>U364</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U364</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U365</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U365</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U366</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U366</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U367</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U367</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U372</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U372</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U373</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U373</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U375</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U375</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U376</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U376</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U377</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U377</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U378</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U378</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U379</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U379</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U381</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U381</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U382</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U382</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U383</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U383</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U384</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U384</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U385</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U385</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U386</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U386</u>	<u>All others</u>	<u>July 8, 1996</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U387</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U387</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U389</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U389</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U390</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U390</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U391</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U391</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U392</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U392</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U393</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U393</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U394</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U394</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U395</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U395</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U396</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U396</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U400</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U400</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U401</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U401</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U402</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U402</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U403</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U403</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U404</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U404</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U407</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U407</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U409</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U409</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U410</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 1. Effective Dates of Surface Disposed Wastes (Non-Soil and Debris)
Regulated in the Land Disposal Restrictions^a - Comprehensive List**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U410</u>	<u>All others</u>	<u>July 8, 1996</u>
<u>U411</u>	<u>Mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>U411</u>	<u>All others</u>	<u>July 8, 1996</u>

^aThis table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which received national capacity variance until May 8, 1992. This table also does not include contaminated soil and debris wastes.

^bThe standard was revised in the Third Third Final Rule (55 FR 22520, June 1, 1990).

^cThe standard was revised in the Third Third Emergency Rule (58 FR 29860, May 24, 1993); the original effective date was August 8, 1990.

^dThe standard was revised in the Phase II Final Rule (59 FR 47982, September 19, 1994); the original effective date was August 8, 1990.

^eThe standards for selected reactive wastes was revised in the Phase III Final Rule (61 FR 15566, April 8, 1996); the original effective date was August 8, 1990.

**Land Disposal Restrictions Effective Dates of Surface Disposed
Prohibited Hazardous Wastes**

**Table 2. Summary of Effective Dates of Land Disposal
Restrictions for Contaminated Soil and Debris**

<u>Restricted Hazardous Waste in Contaminated Soil and Debris</u>	<u>Effective Date</u>
<u>1. Solvent-(F001 through F005) and dioxin-(F020 through F023 and F026 through F028) containing soil and debris from CERCLA response or RCRA corrective actions.</u>	<u>November 8, 1990</u>
<u>2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001 through F005) or dioxins (F020 through F023 and F026 through F028).</u>	<u>November 8, 1988</u>
<u>3. All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.</u>	<u>August 8, 1990</u>
<u>4. All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.</u>	<u>June 8, 1991</u>
<u>5. All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004 through D011 wastes, and all soil and debris contaminated with mixed Resource Conservation and Recovery Act/radioactive wastes.</u>	<u>May 8, 1992</u>
<u>6. Soil and debris contaminated with D012 through D043, K141 through K145, and K147 through K151 wastes.</u>	<u>December 19, 1994</u>
<u>7. Debris (only) contaminated with F037, F038, K107 through K112, K117, K118, K123 through K126, K131, K132, K136, U328, U353, U359.</u>	<u>December 19, 1994</u>
<u>8. Soil and debris contaminated with K156 through K161, P127, P128, P188 through P192, P194, P196 through P199, P201 through P205, U271, U277 through U280, U364 through U367, U372, U373, U375 through U379, U381 through U387, U389 through U396, U400 through U404, U407, and U409 through U411 wastes.</u>	<u>July 8, 1996</u>
<u>9. Soil and debris contaminated with K088 wastes.</u>	<u>October 8, 1997</u>
<u>10. Soil and debris contaminated with radioactive wastes mixed with K088, K156 through K161, P127, P128, P188 through P192, P194, P196 through P199, P201 through P205, U271, U277 through U280, U364 through U367, U372, U373, U375 through U379, U381 through U387, U389 through U396, U400 through U404, U407, and U409 through U411 wastes.</u>	<u>April 8, 1998</u>
<u>11. Soil and debris contaminated with F032, F034, and F035.</u>	<u>May 12, 1997</u>
<u>12. Soil and debris contaminated with newly identified D004 through D011 toxicity characteristic wastes and mineral processing wastes.</u>	<u>August 24, 1998</u>
<u>13. Soil and debris contaminated with mixed radioactive newly identified D004 through D011 characteristic wastes and mineral processing wastes.</u>	<u>May 26, 2000</u>

Note: Appendix XI is provided for the convenience of the reader.

APPENDIX XII.

Ground Water Monitoring List

<u>Common Name¹</u>	<u>CAS RN²</u>	<u>Chemical Abstracts Service Index Name³</u>
<u>Acenaphthene.....</u>	<u>83-32-9</u>	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Acenaphthylene.....</u>	<u>208-96-8</u>	<u>Acenaphthylene</u>
<u>Acetone.....</u>	<u>67-64-1</u>	<u>2-Propanone</u>
<u>Acetophenone.....</u>	<u>98-86-2</u>	<u>Ethanone, 1-phenyl-</u>
<u>Acetonitrile; Methyl cyanide.....</u>	<u>75-05-8</u>	<u>Acetonitrile</u>
<u>2-Acetylaminofluorene; 2-AAF.....</u>	<u>53-96-3</u>	<u>Acetamide, N-9H-fluoren-2-yl-</u>
<u>Acrolein.....</u>	<u>107-02-8</u>	<u>2-Propenal</u>
<u>Acrylonitrile.....</u>	<u>107-13-1</u>	<u>2-Propenenitrile</u>
<u>Aldrin.....</u>	<u>309-00-2</u>	<u>1,4:5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-,1,1,4,4a,5,8,8a-hexahydro- (1α,4 α,4αβ,5α,8α,8αβ)-</u>
<u>Allyl chloride.....</u>	<u>107-05-1</u>	<u>1-Propene, 3-chloro-</u>
<u>4-Aminobiphenyl.....</u>	<u>92-67-1</u>	<u>[1,1'-Biphenyl]-4-amine</u>
<u>Aniline.....</u>	<u>62-53-3</u>	<u>Benzenamine</u>
<u>Anthracene.....</u>	<u>120-12-7</u>	<u>Anthracene</u>
<u>Antimony.....</u>	<u>(Total)</u>	<u>Antimony</u>
<u>Aramite.....</u>	<u>140-57-8</u>	<u>Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester</u>
<u>Arsenic.....</u>	<u>(Total)</u>	<u>Arsenic</u>
<u>Barium.....</u>	<u>(Total)</u>	<u>Barium</u>
<u>Benzene.....</u>	<u>71-43-2</u>	<u>Benzene</u>
<u>Benzof[a]anthracene; Benzanthracene.....</u>	<u>56-55-3</u>	<u>Benz[<u>a</u>]anthracene</u>
<u>Benzo[b]fluoranthene.....</u>	<u>205-99-2</u>	<u>Benz[<u>e</u>]acephenanthrylene</u>
<u>Benzo[k]fluoranthene.....</u>	<u>207-08-9</u>	<u>Benzo[<u>k</u>]fluoranthene</u>
<u>Benzo[ghi]perylene.....</u>	<u>191-24-2</u>	<u>Benzo[<u>ghi</u>]perylene</u>
<u>Benzo[a]pyrene.....</u>	<u>50-32-8</u>	<u>Benzo[<u>a</u>]pyrene</u>
<u>Benzyl alcohol.....</u>	<u>100-51-6</u>	<u>Benzenemethanol</u>
<u>Beryllium.....</u>	<u>(Total)</u>	<u>Beryllium</u>
<u>alpha-BHC.....</u>	<u>319-84-6</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-,(1α,2α,3β,4α,5β,6β)-</u>
<u>beta-BHC.....</u>	<u>319-85-7</u>	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-,(1α,2β,3α,4β,5α,6β)-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>delta-BHC</u>	319-86-8	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2α,3α,4β,5α,6β)-</u>
<u>gamma-BHC; Lindane</u>	58-89-9	<u>Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1α,2α,3β,4α,5α,6β)-</u>
<u>Bis(2-chloroethoxy)methane</u>	111-91-1	<u>Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-</u>
<u>Bis(2-chloroethyl)ether</u>	111-44-4	<u>Ethane, 1,1'-oxybis[2-chloro-</u>
<u>Bis(2-chloro-1-methylethyl) ether;</u> <u>2,2'-Dichlorodiisopropyl ether</u>	108-60-1	<u>Propane, 2,2'-oxybis[1-chloro-</u>
<u>Bis(2-ethylhexyl)phthalate</u>	117-81-7	<u>1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester</u>
<u>Bromodichloromethane</u>	75-27-4	<u>Methane, bromodichloro-</u>
<u>Bromoform; Tribromomethane</u>	75-25-2	<u>Methane, tribromo-</u>
<u>4-Bromophenyl phenyl ether</u>	101-55-3	<u>Benzene, 1-bromo-4-phenoxy-</u>
<u>Butyl benzyl phthalate; Benzyl</u> <u>butyl phthalate</u>	85-68-7	<u>1,2-Benzenedicarboxylic acid, butyl phenylmethyl</u> <u>ester</u>
<u>Cadmium</u>	(Total)	<u>Cadmium</u>
<u>Carbon disulfide</u>	75-15-0	<u>Carbon disulfide</u>
<u>Carbon tetrachloride</u>	56-23-5	<u>Methane, tetrachloro-</u>
<u>Chlordane</u>	57-74-9	<u>4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-</u> <u>hexahydro-</u>
<u>p-Chloroaniline</u>	106-47-8	<u>Benzenamine, 4-chloro-</u>
<u>Chlorobenzene</u>	108-90-7	<u>Benzene, chloro-</u>
<u>Chlorobenzilate</u>	510-15-6	<u>Benzeneacetic acid, 4-chloro-α-(4-chlorophenyl)-α-hydroxy, ethyl</u> <u>ester</u>
<u>p-Chloro-m-cresol</u>	59-50-7	<u>Phenol, 4-chloro-3-methyl-</u>
<u>Chloroethane; Ethyl chloride</u>	75-00-3	<u>Ethane, chloro-</u>
<u>Chloroform</u>	67-66-3	<u>Methane, trichloro-</u>
<u>2-Chloronaphthalene</u>	91-58-7	<u>Naphthalene, 2-chloro-</u>
<u>2-Chlorophenol</u>	95-57-8	<u>Phenol, 2-chloro-</u>
<u>4-Chlorophenyl phenyl ether</u>	7005-72-3	<u>Benzene, 1-chloro-4-phenoxy-</u>
<u>Chloroprene</u>	126-99-8	<u>1,3-Butadiene, 2-chloro-</u>
<u>Chromium</u>	(Total)	<u>Chromium</u>
<u>Chrysene</u>	218-01-9	<u>Chrysene</u>
<u>Cobalt</u>	(Total)	<u>Cobalt</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Copper</u>	(Total)	<u>Copper</u>
<u>m-Cresol</u>	108-39-4	<u>Phenol, 3-methyl-</u>
<u>o-Cresol</u>	95-48-7	<u>Phenol, 2-methyl-</u>
<u>p-Cresol</u>	106-44-5	<u>Phenol, 4-methyl-</u>
<u>Cyanide</u>	57-12-5	<u>Cyanide</u>
<u>2,4-D; 2,4-Dichlorophenoxyacetic acid</u>	94-75-7	<u>Acetic acid, (2,4-dichlorophenoxy)-</u>
<u>4,4'-DDD</u>	72-54-8	<u>Benzene 1,1'-(2,2-dichloroethylidene)bis[4-chloro-</u>
<u>4,4'-DDE</u>	72-55-9	<u>Benzene 1,1'-(dichloroethylidene)bis[4-chloro-</u>
<u>4,4'-DDT</u>	50-29-3	<u>Benzene 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-</u>
<u>Diallate</u>	2303-16-4	<u>Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester</u>
<u>Dibenz[a,h]anthracene</u>	53-70-3	<u>Dibenz[a,h]anthracene</u>
<u>Dibenzofuran</u>	132-64-9	<u>Dibenzofuran</u>
<u>Dibromochloromethane; Chlorodibromomethane</u>	124-48-1	<u>Methane, dibromochloro-</u>
<u>1,2-Dibromo-3-chloropropane; DBCP</u>	96-12-8	<u>Propane, 1,2-dibromo-3-chloro-</u>
<u>1,2-Dibromoethane; Ethylene dibromide</u>	106-93-4	<u>Ethane, 1,2-dibromo-</u>
<u>Di-n-butyl phthalate</u>	84-74-2	<u>1,2-Benzenedicarboxylic acid, dibutyl ester</u>
<u>o-Dichlorobenzene</u>	95-50-1	<u>Benzene, 1,2-dichloro-</u>
<u>m-Dichlorobenzene</u>	541-73-1	<u>Benzene, 1,3-dichloro-</u>
<u>p-Dichlorobenzene</u>	106-46-7	<u>Benzene, 1,4-dichloro-</u>
<u>3,3'-Dichlorobenzidine</u>	91-94-1	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-</u>
<u>trans-1,4-Dichloro-2-butene</u>	110-57-6	<u>2-Butene, 1,4-dichloro-, (E)-</u>
<u>Dichlorodifluoromethane</u>	75-71-8	<u>Methane, dichlorodifluoro-</u>
<u>1,1-Dichloroethane</u>	75-34-3	<u>Ethane, 1,1-dichloro-</u>
<u>1,2-Dichloroethane; Ethylene dichloride</u>	107-06-2	<u>Ethane, 1,2-dichloro-</u>
<u>1,1-Dichloroethylene; Vinylidene chloride</u>	75-35-4	<u>Ethene, 1,1-dichloro-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>trans-1,2-Dichloroethylene</u>	156-60- 5	<u>Ethene, 1,2-dichloro-, (E)-</u>
<u>2,4-Dichlorophenol</u>	120-83- 2	<u>Phenol, 2,4-dichloro-</u>
<u>2,6-Dichlorophenol</u>	87-65-0	<u>Phenol, 2,6-dichloro-</u>
<u>1,2-Dichloropropane</u>	78-87-5	<u>Propane, 1,2-dichloro-</u>
<u>cis-1,3-Dichloropropene</u>	10061- 01-5	<u>1-Propene, 1,3-dichloro-, (Z)-</u>
<u>trans-1,3-Dichloropropene</u>	10061- 02-6	<u>1-Propene, 1,3-dichloro-, (E)-</u>
<u>Dieldrin</u>	60-57-1	<u>2,7:3,6-Dimethanonaphth[2,3-]oxirene, 3,4,5,6,9,9-hexachloro- 1a,2,2a,3,6,6a,7,7a-octahydro-, (1α,2β,2α,3β,6β,6α,7β,7α)-</u>
<u>Diethyl phthalate</u>	84-66-2	<u>1,2-Benzenedicarboxylic acid, diethyl ester</u>
<u>O,O-Diethyl O-2-pyrazinyl phos-</u> <u>phorothioate; Thionazin</u>	297-97- 2	<u>Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester</u>
<u>Dimethoate</u>	60-51-5	<u>Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2- oxoethyl] ester</u>
<u>p-(Dimethylamino)azobenzene</u>	60-11-7	<u>Benzenamine, N,N-dimethyl-4-(phenylazo)-</u>
<u>7,12-Dimethylbenz[a]anthracene</u>	57-97-6	<u>Benz[a]anthracene, 7,12-dimethyl-</u>
<u>3,3'-Dimethylbenzidine</u>	119-93- 7	<u>[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-</u>
<u>alpha,alpha-</u> <u>Dimethylphenethylamine</u>	122-09- 8	<u>Benzeneethanamine, α,α-dimethyl-</u>
<u>2,4-Dimethylphenol</u>	105-67- 9	<u>Phenol, 2,4-dimethyl-</u>
<u>Dimethyl phthalate</u>	131-11- 3	<u>1,2-Benzenedicarboxylic acid, dimethyl ester</u>
<u>m-Dinitrobenzene</u>	99-65-0	<u>Benzene, 1,3-dinitro-</u>
<u>4,6-Dinitro-o-cresol</u>	534-52- 1	<u>Phenol, 2-methyl-4,6-dinitro-</u>
<u>2,4-Dinitrophenol</u>	51-28-5	<u>Phenol, 2,4-dinitro-</u>
<u>2,4-Dinitrotoluene</u>	121-14- 2	<u>Benzene, 1-methyl-2,4-dinitro-</u>
<u>2,6-Dinitrotoluene</u>	606-20- 2	<u>Benzene, 2-methyl-1,3-dinitro-</u>
<u>Dinoseb; DNBP; 2-sec-Butyl-4,6-</u> <u>dinitrophenol</u>	88-85-7	<u>Phenol, 2-(1-methylpropyl)-4,6-dinitro-</u>
<u>Di-n-octyl phthalate</u>	117-84- 0	<u>1,2-Benzenedicarboxylic acid, dioctyl ester</u>
<u>1,4-Dioxane</u>	123-91- 1	<u>1,4-Dioxane</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Diphenylamine</u>	122-39-4	<u>Benzenamine, N-phenyl-</u>
<u>Disulfoton</u>	298-04-4	<u>Phosphorodi thioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester</u>
<u>Endosulfan I</u>	959-98-8	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide,(3α,5$\alpha\beta$,6α,9α,9$\alpha\beta$)-</u>
<u>Endosulfan II</u>	33213-65-9	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide,(3α,5$\alpha\alpha$,6β,9β,9α)-</u>
<u>Endosulfan sulfate</u>	1031-07-8	<u>6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3,3-dioxide</u>
<u>Endrin</u>	72-20-8	<u>2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(1$\alpha\alpha$,2β,2$\alpha\beta$,3α,6α,6$\alpha\beta$,7β,7α)-</u>
<u>Endrin aldehyde</u>	7421-93-4	<u>1,2,4-Methenocyclopenta[cd]pentalene-5-carboxalde-hyde, 2,2a,3,3,4,7-hexachlorodecahydro-,(1α,2β,2$\alpha\beta$,4β,4$\alpha\beta$,5β,6$\alpha\beta$,6β,7R*)-</u>
<u>Ethylbenzene</u>	100-41-4	<u>Benzene, ethyl-</u>
<u>Ethyl methacrylate</u>	97-63-2	<u>2-Propenoic acid, 2-methyl-, ethyl ester</u>
<u>Ethyl methanesulfonate</u>	62-50-0	<u>Methanesulfonic acid, ethyl ester</u>
<u>Famphur</u>	52-85-7	<u>Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester</u>
<u>Fluoranthene</u>	206-44-0	<u>Fluoranthene</u>
<u>Fluorene</u>	86-73-7	<u>9H-Fluorene</u>
<u>Heptachlor</u>	76-44-8	<u>4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-</u>
<u>Heptachlor epoxide</u>	1024-57-3	<u>2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-tachloro-1a,1b,5,5a,6,6a,-hexahydro-,(1$\alpha\alpha$,1$\beta\beta$,2α,5α,5$\alpha\beta$,6β,6α)</u>
<u>Hexachlorobenzene</u>	118-74-1	<u>Benzene, hexachloro-</u>
<u>Hexachlorobutadiene</u>	87-68-3	<u>1,3-Butadiene, 1,1,2,3,4,4-hexachloro-</u>
<u>Hexachlorocyclopentadiene</u>	77-47-4	<u>1,3 Cyclopentadiene, 1,2,3,4,5,5-hexachloro-</u>
<u>Hexachloroethane</u>	67-72-1	<u>Ethane, hexachloro-</u>
<u>Hexachlorophene</u>	70-30-4	<u>Phenol, 2,2'-methylenebis[3,4,6-trichloro-</u>
<u>Hexachloropropene</u>	1888-71-7	<u>1-Propene, 1,1,2,3,3,3-hexachloro-</u>
<u>2-Hexanone</u>	591-76-6	<u>2-Hexanone</u>
<u>Indeno(1,2,3-cd)pyrene</u>	193-39-5	<u>Indeno[1,2,3-cd]pyrene</u>
<u>Isobutyl alcohol</u>	78-83-1	<u>1-Propanol, 2-methyl-</u>
<u>Isodrin</u>	465-73-6	<u>1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a hexahydro-(1α,4α,4$\alpha\beta$,5β,8β,8$\alpha\beta$)-</u>
<u>Isophorone</u>	78-59-1	<u>2-Cyclohexen-1-one, 3,5,5-trimethyl-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Isosafrole</u>	120-58-1	<u>1,3-Benzodioxole, 5-(1-propenyl)-</u>
<u>Kepone</u>	143-50-0	<u>1,3,4-Metheno-2H-cyclobuta-[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-</u>
<u>Lead</u>	(Total)	<u>Lead</u>
<u>Mercury</u>	(Total)	<u>Mercury</u>
<u>Methacrylonitrile</u>	126-98-7	<u>2-Propenenitrile, 2-methyl-</u>
<u>Methapyrilene</u>	91-80-5	<u>1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-</u>
<u>Methoxychlor</u>	72-43-5	<u>Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-</u>
<u>Methyl bromide; Bromomethane</u>	74-83-9	<u>Methane, bromo-</u>
<u>Methyl chloride; Chloromethane</u>	74-87-3	<u>Methane, chloro-</u>
<u>3-Methylcholanthrene</u>	56-49-5	<u>Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-</u>
<u>Methylene bromide; Dibromomethane</u>	74-95-3	<u>Methane, dibromo-</u>
<u>Methylene chloride; Dichloromethane</u>	75-09-2	<u>Methane, dichloro-</u>
<u>Methyl ethyl ketone, MEK</u>	78-93-3	<u>2-Butanone</u>
<u>Methyl iodide; Iodomethane</u>	74-88-4	<u>Methane, iodo-</u>
<u>Methyl methacrylate</u>	80-62-6	<u>2-Propenoic acid, 2-methyl-, methyl ester</u>
<u>Methyl methanesulfonate</u>	66-27-3	<u>Methanesulfonic acid, methyl ester</u>
<u>2-Methylnaphthalene</u>	91-57-6	<u>Naphthalene, 2-methyl-</u>
<u>Methyl parathion; Parathion methyl</u> ..	298-00-0	<u>Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester</u>
<u>4-Methyl-2-pentanone; Methyl isobutyl ketone</u>	108-10-1	<u>2-Pentanone, 4-methyl-</u>
<u>Naphthalene</u>	91-20-3	<u>Naphthalene</u>
<u>1,4-Naphthoquinone</u>	130-15-4	<u>1,4-Naphthalenedione</u>
<u>1-Naphthylamine</u>	134-32-7	<u>1-Naphthalenamine</u>
<u>2-Naphthylamine</u>	91-59-8	<u>2-Naphthalenamine</u>
<u>Nickel</u>	(Total)	<u>Nickel</u>
<u>o-Nitroaniline</u>	88-74-4	<u>Benzenamine, 2-nitro-</u>
<u>m-Nitroaniline</u>	99-09-2	<u>Benzenamine, 3-nitro-</u>
<u>p-Nitroaniline</u>	100-01-6	<u>Benzenamine, 4-nitro-</u>
<u>Nitrobenzene</u>	98-95-3	<u>Benzene, nitro-</u>
<u>o-Nitrophenol</u>	88-75-5	<u>Phenol, 2-nitro-</u>
<u>p-Nitrophenol</u>	100-02-7	<u>Phenol, 4-nitro-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>4-Nitroquinoline 1-oxide</u>	56-57-5	<u>Quinoline, 4-nitro, 1-oxide</u>
<u>N-Nitrosodi-n-butylamine</u>	924-16- 3	<u>1-Butanamine, N-butyl-N-nitroso-</u>
<u>N-Nitrosodiethylamine</u>	55-18-5	<u>Ethanamine, N-ethyl-N-nitroso-</u>
<u>N-Nitrosodimethylamine</u>	62-75-9	<u>Methanamine, N-methyl-N-nitroso-</u>
<u>N-Nitrosodiphenylamine</u>	86-30-6	<u>Benzenamine, N-nitroso-N-phenyl</u>
<u>N-Nitrosodipropylamine; Di-n- propylnitrosamine</u>	621-64- 7	<u>1-Propanamine, N-nitroso-N-propyl-</u>
<u>N-Nitrosomethylethylamine</u>	10595- 95-6	<u>Ethanamine, N-methyl-N-nitroso-</u>
<u>N-Nitrosomorpholine</u>	59-89-2	<u>Morpholine, 4-nitroso-</u>
<u>N-Nitrosopiperidine</u>	100-75- 4	<u>Piperidine, 1-nitroso-</u>
<u>N-Nitrosopyrrolidine</u>	930-55- 2	<u>Pyrrolidine, 1-nitroso-</u>
<u>5-Nitro-o-toluidine</u>	99-55-8	<u>Benzenamine, 2-methyl-5-nitro-</u>
<u>Parathion</u>	56-38-2	<u>Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl)ester</u>
<u>Polychlorinated biphenyls; PCBs</u>	See Note 4	<u>1,1'-Biphenyl, chloro derivatives</u>
<u>Polychlorinated dibenzo-p- dioxins; PCDDs</u>	See Note 5	<u>Dibenzo[b,e][1,4]dioxin, chloro derivatives</u>
<u>Polychlorinated dibenzofurans; PCDFs</u>	See Note 6	<u>Dibenzofuran, chloro derivatives</u>
<u>Pentachlorobenzene</u>	608-93- 5	<u>Benzene, pentachloro-</u>
<u>Pentachloroethane</u>	76-01-7	<u>Ethane, pentachloro-</u>
<u>Pentachloronitrobenzene</u>	82-68-8	<u>Benzene, pentachloronitro-</u>
<u>Pentachlorophenol</u>	87-86-5	<u>Phenol, pentachloro-</u>
<u>Phenacetin</u>	62-44-2	<u>Acetamide, N-(4-ethoxyphenyl)</u>
<u>Phenanthrene</u>	85-01-8	<u>Phenanthrene</u>
<u>Phenol</u>	108-95- 2	<u>Phenol</u>
<u>p-Phenylenediamine</u>	106-50- 3	<u>1,4-Benzenediamine</u>
<u>Phorate</u>	298-02- 2	<u>Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl]ester</u>
<u>2-Picoline</u>	109-06- 8	<u>Pyridine, 2-methyl-</u>
<u>Pronamide</u>	23950-	<u>Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9 58-5	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Propionitrile; Ethyl cyanide</u>	107-12- 0	<u>Propanenitrile</u>
<u>Pyrene</u>	129-00- 0	<u>Pyrene</u>
<u>Pyridine</u>	110-86- 1	<u>Pyridine</u>
<u>Safrole</u>	94-59-7	<u>1,3-Benzodioxole, 5-(2-propenyl)-</u>
<u>Selenium</u>	(Total)	<u>Selenium</u>
<u>Silver</u>	(Total)	<u>Silver</u>
<u>Silvex; 2,4,5-TP</u>	93-72-1	<u>Propanoic acid, 2-(2,4,5-trichlorophenoxy)-</u>
<u>Styrene</u>	100-42- 5	<u>Benzene, ethenyl-</u>
<u>Sulfide</u>	18496- 25-8	<u>Sulfide</u>
<u>2,4,5-T; 2,4,5-Trichlorophenoxy- acetic acid</u>	93-76-5	<u>Acetic acid, (2,4,5-trichlorophenoxy)-</u>
<u>2,3,7,8-TCDD; 2,3,7,8-Tetrachloro- dibenzo-p-dioxin</u>	1746- 01-6	<u>Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	95-94-3	<u>Benzene, 1,2,4,5-tetrachloro-</u>
<u>1,1,1,2-Tetrachloroethane</u>	630-20- 6	<u>Ethane, 1,1,1,2-tetrachloro-</u>
<u>1,1,2,2-Tetrachloroethane</u>	79-34-5	<u>Ethane, 1,1,2,2-tetrachloro-</u>
<u>Tetrachloroethylene; Perchloro- ethylene; Tetrachloroethene</u>	127-18- 4	<u>Ethene, tetrachloro-</u>
<u>2,3,4,6-Tetrachlorophenol</u>	58-90-2	<u>Phenol, 2,3,4,6-tetrachloro-</u>
<u>Tetraethyl dithiopyrophosphate; Sulfotep</u>	3689- 24-5	<u>Thiodiphosphoric acid ((HO)₂ P(S)₂ O), tetraethyl ester</u>
<u>Thallium</u>	(Total)	<u>Thallium</u>
<u>Tin</u>	(Total)	<u>Tin</u>
<u>Toluene</u>	108-88- 3	<u>Benzene, methyl-</u>
<u>o-Toluidine</u>	95-53-4	<u>Benzenamine, 2-methyl-</u>
<u>Toxaphene</u>	8001- 35-2	<u>Toxaphene</u>
<u>1,2,4-Trichlorobenzene</u>	120-82- 1	<u>Benzene, 1,2,4-trichloro-</u>
<u>1,1,1-Trichloroethane</u>	71-55-6	<u>Ethane, 1,1,1-trichloro-</u>

<u>Common Name</u> ¹	<u>CAS RN</u> ²	<u>Chemical Abstracts Service Index Name</u> ³
<u>Acenaphthene</u>	83-32-9	<u>Acenaphthylene, 1,2-dihydro-</u>
<u>Methylchloroform</u>		
<u>1,1,2-Trichloroethane</u>	79-00-5	<u>Ethane, 1,1,2-trichloro-</u>
<u>Trichloroethylene; Trichloroethene</u> ...	79-01-6	<u>Ethene, trichloro-</u>
<u>Trichlorofluoromethane</u>	75-69-4	<u>Methane, trichlorofluoro-</u>
<u>2,4,5-Trichlorophenol</u>	95-95-4	<u>Phenol, 2,4,5-trichloro-</u>
<u>2,4,6-Trichlorophenol</u>	88-06-2	<u>Phenol, 2,4,6-trichloro-</u>
<u>1,2,3-Trichloropropane</u>	96-18-4	<u>Propane, 1,2,3-trichloro-</u>
<u>O,O,O-Triethyl phosphorothioate</u>	126-68-1	<u>Phosphorothioic acid, O,O,O-triethyl ester</u>
<u>sym-Trinitrobenzene</u>	99-35-4	<u>Benzene, 1,3,5-trinitro-</u>
<u>Vanadium</u>	(Total)	<u>Vanadium</u>
<u>Vinyl acetate</u>	108-05-4	<u>Acetic acid, ethenyl ester</u>
<u>Vinyl chloride</u>	75-01-4	<u>Ethene, chloro-</u>
<u>Xylene (total)</u>	1330-20-7	<u>Benzene, dimethyl-</u>
<u>Zinc</u>	(Total)	<u>Zinc</u>

¹Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

²Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

³CAS index names are those used in the 9th Cumulative Index.

⁴Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor-1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5).

⁵This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins.

⁶This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans.

APPENDIX XIII

<u>Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes National Capacity Land Disposal Restrictions Variances for Underground Injection Control Wastes^a</u>		
<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>F001-F005</u>	<u>All spent F001-F005 solvent containing less than 1 percent total F001-F005 solvent constituents</u>	<u>August 8, 1990</u>
<u>D001 (except high total organic carbon ignitable liquids subcategory)</u>	<u>All</u>	<u>February 10, 1994</u>
<u>D001 (high total organic carbon ignitable liquids subcategory)</u>	<u>Nonwastewater</u>	<u>September 19, 1995</u>
<u>D002^b</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D002^c</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (cyanides)</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (sulfides)</u>	<u>All</u>	<u>May 8, 1992</u>
<u>D003 (explosives, reactives)</u>	<u>All</u>	<u>September 10, 1995</u>
<u>D007</u>	<u>All</u>	<u>September 10, 1995</u>
<u>D009</u>	<u>Non.</u>	<u>September 10, 1995</u>
<u>D012</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D013</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D014</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D015</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D016</u>	<u>All</u>	<u>September 19, 1995</u>
<u>D017</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D018</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D019</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D020</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D021</u>	<u>All, including mixed with radioactive wastes</u>	<u>April 8, 1998</u>
<u>D022</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D023</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D024</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D025</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D026</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D027</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D028</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D029</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D030</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D031</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>
<u>D032</u>	<u>All, including mixed radioactive wastes</u>	<u>April 8, 1998</u>

Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes
National Capacity Land Disposal Restrictions Variances for Underground Injection
Control Wastes^a

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
D033	All, including mixed radioactive wastes	April 8, 1998
D034	All, including mixed radioactive wastes	April 8, 1998
D035	All, including mixed radioactive wastes	April 8, 1998
D036	All, including mixed radioactive wastes	April 8, 1998
D037	All, including mixed radioactive wastes	April 8, 1998
D038	All, including mixed radioactive wastes	April 8, 1998
D039	All, including mixed radioactive wastes	April 8, 1998
D040	All, including mixed radioactive wastes	April 8, 1998
D041	All, including mixed radioactive wastes	April 8, 1998
D042	All, including mixed radioactive wastes	April 8, 1998
D043	All, including mixed radioactive wastes	April 8, 1998
F007	All, including mixed radioactive wastes	April 8, 1998
F032	All, including mixed radioactive wastes	May 12, 1999
F034	All, including mixed radioactive wastes	May 12, 1999
F035	All, including mixed radioactive wastes	May 12, 1999
F037	All	November 8, 1992
F038	All	November 8, 1992
F039	All, including mixed radioactive wastes	May 12, 1999
K009	Wastewater	June 8, 1991
K011	Nonwastewater	June 8, 1991
K011	Wastewater	May 8, 1992
K013	Nonwastewater	June 8, 1991
K013	Wastewater	May 8, 1992
K014	All	May 8, 1992
K016 (dilute)	All	June 8, 1991
K049	All	August 8, 1990
K050	All	August 8, 1990
K051	All	August 8, 1990
K052	All	August 8, 1990
K062	All	January 8, 1997
K071	All	August 8, 1990
K088	All	November 8, 1992
K104	All	November 9, 1992
K107	All	November 9, 1992
K108	All	November 9, 1992

**Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes
National Capacity Land Disposal Restrictions Variances for Underground Injection
Control Wastes^a**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>K109</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K110</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K111</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K112</u>	<u>All</u>	<u>June 30, 1995</u>
<u>K117</u>	<u>All</u>	<u>June 30, 1995</u>
<u>K118</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K123</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K124</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K125</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K126</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K131</u>	<u>All</u>	<u>June 30, 1995</u>
<u>K132</u>	<u>All</u>	<u>November 9, 1992</u>
<u>K136</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K141</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K142</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K143</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K144</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K145</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K147</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K148</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K149</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K150</u>	<u>All</u>	<u>December 19, 1994</u>
<u>K151</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K156</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K157</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K158</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K159</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K160</u>	<u>All</u>	<u>July 8, 1996</u>
<u>K161</u>	<u>All</u>	<u>July 8, 1996</u>
<u>NA</u>	<u>Newly identified mineral processing wastes from titanium dioxide production and mixed radioactive, newly identified D004 through D011 characteristic wastes and mineral processing wastes</u>	<u>May 26, 2000</u>
<u>P127</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P128</u>	<u>All</u>	<u>July 8, 1996</u>

**Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes
National Capacity Land Disposal Restrictions Variances for Underground Injection
Control Wastes^a**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>P185</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P188</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P189</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P190</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P191</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P192</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P194</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P196</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P197</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P198</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P199</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P201</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P202</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P203</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P204</u>	<u>All</u>	<u>July 8, 1996</u>
<u>P205</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U271</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U277</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U278</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U279</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U280</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U328</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U353</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U359</u>	<u>All</u>	<u>November 9, 1992</u>
<u>U364</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U365</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U366</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U367</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U372</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U373</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U375</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U376</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U377</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U378</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U379</u>	<u>All</u>	<u>July 8, 1996</u>

**Land Disposal Restriction Effective Dates of Injected Prohibited Hazardous Wastes
National Capacity Land Disposal Restrictions Variances for Underground Injection
Control Wastes^a**

<u>Waste Code</u>	<u>Waste Category</u>	<u>Effective Date</u>
<u>U381</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U382</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U383</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U384</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U385</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U386</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U387</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U389</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U390</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U391</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U392</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U395</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U396</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U400</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U401</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U402</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U403</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U404</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U407</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U409</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U410</u>	<u>All</u>	<u>July 8, 1996</u>
<u>U411</u>	<u>All</u>	<u>July 8, 1996</u>

^aWastes that are deep well disposed onsite receive a six-month variance, with restrictions effective in November 1990.

^bDeep well injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

^cManaged in systems defined in 40 CFR 144.6(e) and 14.6(e) as Class V injection wells, that do not engage in Clean Water Act-equivalent treatment before injection.

Note: This table is provided for the convenience of the reader.

APPENDIX XIV

[Reserved]

APPENDIX XV

[Reserved]

APPENDIX XVI

Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

Table I-A. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain						
<i>Values for Urban Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
4	6.0E+01	1.0E+04	1.8E+01	6.0E+01	6.0E+02	6.0E+01
6	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
8	7.6E+01	1.3E+04	2.3E+01	7.6E+01	7.6E+02	7.6E+01
10	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
12	9.6E+01	1.7E+04	3.0E+01	9.6E+01	9.6E+02	9.6E+01
14	1.1E+02	1.8E+04	3.4E+01	1.1E+02	1.1E+03	1.1E+02
16	1.3E+02	2.1E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
18	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
20	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
22	1.8E+02	3.0E+04	5.4E+01	1.8E+02	1.8E+03	1.8E+02
24	2.0E+02	3.4E+04	6.0E+01	2.0E+02	2.0E+03	2.0E+02
26	2.3E+02	3.9E+04	6.8E+01	2.3E+02	2.3E+03	2.3E+02
28	2.6E+02	4.3E+04	7.8E+01	2.6E+02	2.6E+03	2.6E+02
30	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
35	4.0E+02	6.6E+04	1.1E+02	4.0E+02	4.0E+03	4.0E+02
40	4.6E+02	7.8E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
45	6.0E+02	1.0E+05	1.8E+02	6.0E+02	6.0E+03	6.0E+02
50	7.8E+02	1.3E+05	2.3E+02	7.8E+02	7.8E+03	7.8E+02
55	9.6E+02	1.7E+05	3.0E+02	9.6E+02	9.6E+03	9.6E+02
60	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
65	1.5E+03	2.5E+05	4.3E+02	1.5E+03	1.5E+04	1.5E+03
70	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
75	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
80	2.2E+03	3.6E+05	6.4E+02	2.2E+03	2.2E+04	2.2E+04
85	2.5E+03	4.0E+05	7.6E+02	2.5E+03	2.5E+04	2.5E+03
90	2.8E+03	4.6E+05	8.2E+02	2.8E+03	2.8E+04	2.8E+03
95	3.2E+03	5.4E+05	9.6E+02	3.2E+03	3.2E+04	3.2E+03

Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

Table I-A. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

<i>Values for Urban Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
<u>4</u>	<u>6.0E+01</u>	<u>1.0E+04</u>	<u>1.8E+01</u>	<u>6.0E+01</u>	<u>6.0E+02</u>	<u>6.0E+01</u>
<u>100</u>	<u>3.6E+03</u>	<u>6.0E+05</u>	<u>1.1E+03</u>	<u>3.6E+03</u>	<u>3.6E+04</u>	<u>3.6E+03</u>
<u>105</u>	<u>4.0E+03</u>	<u>6.8E+05</u>	<u>1.2E+03</u>	<u>4.0E+03</u>	<u>4.0E+04</u>	<u>4.0E+03</u>
<u>110</u>	<u>4.6E+03</u>	<u>7.8E+05</u>	<u>1.4E+03</u>	<u>4.6E+03</u>	<u>4.6E+04</u>	<u>4.6E+03</u>
<u>115</u>	<u>5.4E+03</u>	<u>8.6E+05</u>	<u>1.6E+03</u>	<u>5.4E+03</u>	<u>5.4E+04</u>	<u>5.4E+03</u>
<u>120</u>	<u>6.0E+03</u>	<u>1.0E+06</u>	<u>1.8E+03</u>	<u>6.0E+03</u>	<u>6.0E+04</u>	<u>6.0E+03</u>

Table I-B. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

<i>Values for Rural Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
<u>4</u>	<u>3.1E+01</u>	<u>5.2E+03</u>	<u>9.4E+00</u>	<u>3.1E+01</u>	<u>3.1E+02</u>	<u>3.1E+01</u>
<u>6</u>	<u>3.6E+01</u>	<u>6.0E+03</u>	<u>1.1E+01</u>	<u>3.6E+01</u>	<u>3.6E+02</u>	<u>3.6E+01</u>
<u>8</u>	<u>4.0E+01</u>	<u>6.8E+03</u>	<u>1.2E+01</u>	<u>4.0E+01</u>	<u>4.0E+02</u>	<u>4.0E+01</u>
<u>10</u>	<u>4.6E+01</u>	<u>7.8E+03</u>	<u>1.4E+01</u>	<u>4.6E+01</u>	<u>4.6E+02</u>	<u>4.6E+01</u>
<u>12</u>	<u>5.8E+01</u>	<u>9.6E+03</u>	<u>1.7E+01</u>	<u>5.8E+01</u>	<u>5.8E+02</u>	<u>5.8E+01</u>
<u>14</u>	<u>6.8E+01</u>	<u>1.1E+04</u>	<u>2.1E+01</u>	<u>6.8E+01</u>	<u>6.8E+02</u>	<u>6.8E+01</u>
<u>16</u>	<u>8.6E+01</u>	<u>1.4E+04</u>	<u>2.6E+01</u>	<u>8.6E+01</u>	<u>8.6E+02</u>	<u>8.6E+01</u>
<u>18</u>	<u>1.1E+02</u>	<u>1.8E+04</u>	<u>3.2E+01</u>	<u>1.1E+02</u>	<u>1.1E+03</u>	<u>1.1E+02</u>
<u>20</u>	<u>1.3E+02</u>	<u>2.2E+04</u>	<u>4.0E+01</u>	<u>1.3E+02</u>	<u>1.3E+03</u>	<u>1.3E+02</u>
<u>22</u>	<u>1.7E+02</u>	<u>2.8E+04</u>	<u>5.0E+01</u>	<u>1.7E+02</u>	<u>1.7E+03</u>	<u>1.7E+02</u>
<u>24</u>	<u>2.2E+02</u>	<u>3.6E+04</u>	<u>6.4E+01</u>	<u>2.2E+02</u>	<u>2.2E+03</u>	<u>2.2E+02</u>
<u>26</u>	<u>2.8E+02</u>	<u>4.6E+04</u>	<u>8.2E+01</u>	<u>2.8E+02</u>	<u>2.8E+03</u>	<u>2.8E+02</u>
<u>28</u>	<u>3.5E+02</u>	<u>5.8E+04</u>	<u>1.0E+02</u>	<u>3.5E+02</u>	<u>3.5E+03</u>	<u>3.5E+02</u>
<u>30</u>	<u>4.3E+02</u>	<u>7.6E+04</u>	<u>1.3E+02</u>	<u>4.3E+02</u>	<u>4.3E+03</u>	<u>4.3E+02</u>
<u>35</u>	<u>7.2E+02</u>	<u>1.2E+05</u>	<u>2.1E+02</u>	<u>7.2E+02</u>	<u>7.2E+03</u>	<u>7.2E+02</u>
<u>40</u>	<u>1.1E+03</u>	<u>1.8E+05</u>	<u>3.2E+02</u>	<u>1.1E+03</u>	<u>1.1E+04</u>	<u>1.1E+03</u>
<u>45</u>	<u>1.5E+03</u>	<u>2.5E+05</u>	<u>4.6E+02</u>	<u>1.5E+03</u>	<u>1.5E+04</u>	<u>1.5E+03</u>
<u>50</u>	<u>2.0E+03</u>	<u>3.3E+05</u>	<u>6.0E+02</u>	<u>2.0E+03</u>	<u>2.0E+04</u>	<u>2.0E+03</u>

Table I-B. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

<i>Values for Rural Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
4	3.1E+01	5.2E+03	9.4E+00	3.1E+01	3.1E+02	3.1E+01
55	2.6E+03	4.4E+05	7.8E+02	2.6E+03	2.6E+04	2.6E+03
60	3.4E+03	5.8E+05	1.0E+03	3.4E+03	3.4E+04	3.4E+03
65	4.6E+03	7.6E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
70	5.4E+03	9.0E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
75	6.4E+03	1.1E+06	1.9E+03	6.4E+03	6.4E+04	6.4E+03
80	7.6E+03	1.3E+06	2.3E+03	7.6E+03	7.6E+04	7.6E+03
85	9.4E+03	1.5E+06	2.8E+03	9.4E+03	9.4E+04	9.4E+03
90	1.1E+04	1.8E+06	3.3E+03	1.1E+04	1.1E+05	1.1E+04
95	1.3E+04	2.2E+06	3.9E+03	1.3E+04	1.3E+05	1.3E+04
100	1.5E+04	2.6E+06	4.6E+03	1.5E+04	1.5E+05	1.5E+04
105	1.8E+04	3.0E+06	5.4E+03	1.8E+04	1.8E+05	1.8E+04
110	2.2E+04	3.6E+06	6.6E+03	2.2E+04	2.2E+05	2.2E+04
115	2.6E+04	4.4E+06	7.8E+03	2.6E+04	2.6E+05	2.6E+04
120	3.1E+04	5.0E+06	9.2E+03	3.1E+04	3.1E+05	3.1E+04

Table I-C. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain

<i>Values for Urban and Rural Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
4	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
6	2.1E+01	3.5E+03	6.2E+00	2.1E+01	2.1E+02	2.1E+01
8	3.0E+01	5.0E+03	9.2E+00	3.0E+01	3.0E+02	3.0E+01
10	4.3E+01	7.6E+03	1.3E+01	4.3E+01	4.3E+02	4.3E+01
12	5.4E+01	9.0E+03	1.7E+01	5.4E+01	5.4E+02	5.4E+01
14	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
16	7.8E+01	1.3E+04	2.4E+01	7.8E+01	7.8E+02	7.8E+01
18	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
20	9.6E+01	1.6E+04	2.9E+01	9.6E+01	9.6E+02	9.6E+01
22	1.0E+02	1.8E+04	3.2E+01	1.0E+02	1.0E+03	1.0E+02
24	1.2E+02	1.9E+04	3.5E+01	1.2E+02	1.2E+03	1.2E+02

Table I-C. Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain

<i>Values for Urban and Rural Areas</i>						
<u>TESH (m)</u>	<u>Antimony (g/hr)</u>	<u>Barium (g/hr)</u>	<u>Lead (g/hr)</u>	<u>Mercury (g/hr)</u>	<u>Silver (g/hr)</u>	<u>Thallium (g/hr)</u>
4	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
26	1.3E+02	2.2E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
28	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
30	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
35	2.0E+02	3.3E+04	5.8E+01	2.0E+02	2.0E+03	2.0E+02
40	2.4E+02	4.0E+04	7.2E+01	2.4E+02	2.4E+03	2.4E+02
45	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
50	3.6E+02	6.0E+04	1.1E+02	3.6E+02	3.6E+03	3.6E+02
55	4.6E+02	7.6E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
60	5.8E+02	9.4E+04	1.7E+02	5.8E+02	5.8E+03	5.8E+02
65	6.8E+02	1.1E+05	2.1E+02	6.8E+02	6.8E+03	6.8E+02
70	7.8E+02	1.3E+05	2.4E+02	7.8E+02	7.8E+03	7.8E+02
75	8.6E+02	1.4E+05	2.6E+02	8.6E+02	8.6E+03	8.6E+02
80	9.6E+02	1.6E+05	2.9E+02	9.6E+02	9.6E+03	9.6E+02
85	1.1E+03	1.8E+05	3.3E+02	1.1E+03	1.1E+04	1.1E+03
90	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
95	1.4E+03	2.3E+05	4.0E+02	1.4E+03	1.4E+04	1.4E+03
100	1.5E+03	2.6E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
105	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
110	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
115	2.1E+03	3.6E+05	6.4E+02	2.1E+03	2.1E+04	2.1E+03
120	2.4E+03	4.0E+05	7.2E+02	2.4E+03	2.4E+04	2.4E+03

Table I-D. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Noncomplex Terrain

<i>Values for Use in Urban Areas</i>					<i>Values for Use in Rural Areas</i>			
<u>TESH (m)</u>	<u>Arsenic (g/hr)</u>	<u>Cadmium (g/hr)</u>	<u>Chromium (g/hr)</u>	<u>Beryllium (g/hr)</u>	<u>Arsenic (g/hr)</u>	<u>Cadmium (g/hr)</u>	<u>Chromium (g/hr)</u>	<u>Beryllium (g/hr)</u>
4	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
6	5.4E-01	1.3E+00	1.9E-01	9.4E-01	2.8E-01	6.6E-01	1.0E-01	5.0E-01
8	6.0E-01	1.4E+00	2.2E-01	1.1E+00	3.2E-01	7.6E-01	1.1E-01	5.6E-01
10	6.8E-01	1.6E+00	2.4E-01	1.2E+00	3.6E-01	8.6E-01	1.3E-01	6.4E-01
12	7.6E-01	1.8E+00	2.7E-01	1.4E+00	4.3E-01	1.1E+00	1.6E-01	7.8E-01

Table I-D. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Noncomplex Terrain

Values for Use in <i>Urban Areas</i>					Values for Use in <i>Rural Areas</i>			
TESH (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
14	8.6E-01	2.1E+00	3.1E-01	1.5E+00	5.4E-01	1.3E+00	2.0E-01	9.6E-01
16	9.6E-01	2.3E+00	3.5E-01	1.7E+00	6.8E-01	1.6E+00	2.4E-01	1.2E+00
18	1.1E+00	2.6E+00	4.0E-01	2.0E+00	8.2E-01	2.0E+00	3.0E-01	1.5E+00
20	1.2E+00	3.0E+00	4.4E-01	2.2E+00	1.0E+00	2.5E+00	3.7E-01	1.9E+00
22	1.4E+00	3.4E+00	5.0E-01	2.5E+00	1.3E+00	3.2E+00	4.8E-01	2.4E+00
24	1.6E+00	3.9E+00	5.8E-01	2.8E+00	1.7E+00	4.0E+00	6.0E-01	3.0E+00
26	1.8E+00	4.3E+00	6.4E-01	3.2E+00	2.1E+00	5.0E+00	7.6E-01	3.9E+00
28	2.0E+00	4.8E+00	7.2E-01	3.6E+00	2.7E+00	6.4E+00	9.8E-01	5.0E+00
30	2.3E+00	5.4E+00	8.2E-01	4.0E+00	3.5E+00	8.2E+00	1.2E+00	6.2E+00
35	3.0E+00	6.8E+00	1.0E+00	5.4E+00	5.4E+00	1.3E+01	1.9E+00	9.6E+00
40	3.6E+00	9.0E+00	1.3E+00	6.8E+00	8.2E+00	2.0E+01	3.0E+00	1.5E+01
45	4.6E+00	1.1E+01	1.7E+00	8.6E+00	1.1E+01	2.8E+01	4.2E+00	2.1E+01
50	6.0E+00	1.4E+01	2.2E+00	1.1E+01	1.5E+01	3.7E+01	5.4E+00	2.8E+01
55	7.6E+00	1.8E+01	2.7E+00	1.4E+01	2.0E+01	5.0E+01	7.2E+00	3.6E+01
60	9.4E+00	2.2E+01	3.4E+00	1.7E+01	2.7E+01	6.4E+01	9.6E+00	4.8E+01
65	1.1E+01	2.8E+01	4.2E+00	2.1E+01	3.6E+01	8.6E+01	1.3E+01	6.4E+01
70	1.3E+01	3.1E+01	4.6E+00	2.4E+01	4.3E+01	1.0E+02	1.5E+01	7.6E+01
75	1.5E+01	3.6E+01	5.4E+01	2.7E+01	5.0E+01	1.2E+02	1.8E+01	9.0E+01
80	1.7E+01	4.0E+01	6.0E+00	3.0E+01	6.0E+01	1.4E+02	2.2E+01	1.1E+02
85	1.9E+01	4.6E+01	6.8E+00	3.4E+01	7.2E+01	1.7E+02	2.6E+01	1.3E+02
90	2.2E+01	5.0E+01	7.8E+00	3.9E+01	8.6E+01	2.0E+02	3.0E+01	1.5E+02
95	2.5E+01	5.8E+01	9.0E+00	4.4E+01	1.0E+02	2.4E+02	3.6E+01	1.8E+02
100	2.8E+01	6.8E+01	1.0E+01	5.0E+01	1.2E+02	2.9E+02	4.3E+01	2.2E+02
105	3.2E+01	7.6E+01	1.1E+01	5.6E+01	1.4E+02	3.4E+02	5.0E+01	2.6E+02
110	3.6E+01	8.6E+01	1.3E+01	6.4E+01	1.7E+02	4.0E+02	6.0E+01	3.0E+02
115	4.0E+01	9.6E+01	1.5E+01	7.2E+01	2.0E+02	4.8E+02	7.2E+01	3.6E+02
120	4.6E+01	1.1E+02	1.7E+01	8.2E+01	2.4E+02	5.8E+02	8.6E+01	4.3E+02

Table I-E. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain

<u>Values for Use in <i>Urban</i> and <i>Rural</i> Areas</u>				
<u>TESH</u> <u>(m)</u>	<u>Arsenic</u> <u>(g/hr)</u>	<u>Cadmium</u> <u>(g/hr)</u>	<u>Chromium</u> <u>(g/hr)</u>	<u>Beryllium</u> <u>(g/hr)</u>
<u>4</u>	<u>1.1E-01</u>	<u>2.6E-01</u>	<u>4.0E-02</u>	<u>2.0E-01</u>
<u>6</u>	<u>1.6E-01</u>	<u>3.9E-01</u>	<u>5.8E-02</u>	<u>2.9E-01</u>
<u>8</u>	<u>2.4E-01</u>	<u>5.8E-01</u>	<u>8.6E-02</u>	<u>4.3E-01</u>
<u>10</u>	<u>3.5E-01</u>	<u>8.2E-01</u>	<u>1.3E-01</u>	<u>6.2E-01</u>
<u>12</u>	<u>4.3E-01</u>	<u>1.0E+00</u>	<u>1.5E-01</u>	<u>7.6E-01</u>
<u>14</u>	<u>5.0E-01</u>	<u>1.3E+00</u>	<u>1.9E-01</u>	<u>9.4E-01</u>
<u>16</u>	<u>6.0E-01</u>	<u>1.4E+00</u>	<u>2.2E-01</u>	<u>1.1E+00</u>
<u>18</u>	<u>6.8E-01</u>	<u>1.6E+00</u>	<u>2.4E-01</u>	<u>1.2E+00</u>
<u>20</u>	<u>7.6E-01</u>	<u>1.8E+00</u>	<u>2.7E-01</u>	<u>1.3E+00</u>
<u>22</u>	<u>8.2E-01</u>	<u>1.9E+00</u>	<u>3.0E-01</u>	<u>1.5E+00</u>
<u>24</u>	<u>9.0E-01</u>	<u>2.1E+00</u>	<u>3.3E-01</u>	<u>1.6E+00</u>
<u>26</u>	<u>1.0E+00</u>	<u>2.4E+00</u>	<u>3.6E-01</u>	<u>1.8E+00</u>
<u>28</u>	<u>1.1E+00</u>	<u>2.7E+00</u>	<u>4.0E-01</u>	<u>2.0E+00</u>
<u>30</u>	<u>1.2E+00</u>	<u>3.0E+00</u>	<u>4.4E-01</u>	<u>2.2E+00</u>
<u>35</u>	<u>1.5E+00</u>	<u>3.7E+00</u>	<u>5.4E-01</u>	<u>2.7E+00</u>
<u>40</u>	<u>1.9E+00</u>	<u>4.6E+00</u>	<u>6.8E-01</u>	<u>3.4E+00</u>
<u>45</u>	<u>2.4E+00</u>	<u>5.4E+00</u>	<u>8.4E-01</u>	<u>4.2E+00</u>
<u>50</u>	<u>2.9E+00</u>	<u>6.8E+00</u>	<u>1.0E+00</u>	<u>5.0E+00</u>
<u>55</u>	<u>3.5E+00</u>	<u>8.4E+00</u>	<u>1.3E+00</u>	<u>6.4E+00</u>
<u>60</u>	<u>4.3E+00</u>	<u>1.0E+01</u>	<u>1.5E+00</u>	<u>7.8E+00</u>
<u>65</u>	<u>5.4E+00</u>	<u>1.3E+01</u>	<u>1.9E+00</u>	<u>9.6E+00</u>
<u>70</u>	<u>6.0E+00</u>	<u>1.4E+01</u>	<u>2.2E+00</u>	<u>1.1E+01</u>
<u>75</u>	<u>6.8E+00</u>	<u>1.6E+01</u>	<u>2.4E+00</u>	<u>1.2E+01</u>
<u>80</u>	<u>7.6E+00</u>	<u>1.8E+01</u>	<u>2.7E+00</u>	<u>1.3E+01</u>
<u>85</u>	<u>8.2E+00</u>	<u>2.0E+01</u>	<u>3.0E+00</u>	<u>1.5E+01</u>
<u>90</u>	<u>9.4E+00</u>	<u>2.3E+01</u>	<u>3.4E+00</u>	<u>1.7E+01</u>
<u>95</u>	<u>1.0E+01</u>	<u>2.5E+01</u>	<u>4.0E+00</u>	<u>1.9E+01</u>
<u>100</u>	<u>1.2E+01</u>	<u>2.8E+01</u>	<u>4.3E+00</u>	<u>2.1E+01</u>
<u>105</u>	<u>1.3E+01</u>	<u>3.2E+01</u>	<u>4.8E+00</u>	<u>2.4E+01</u>
<u>110</u>	<u>1.5E+01</u>	<u>3.5E+01</u>	<u>5.4E+00</u>	<u>2.7E+01</u>

Table I-E. Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain

<u>Values for Use in <i>Urban</i> and <i>Rural</i> Areas</u>				
<u>TESH</u> <u>(m)</u>	<u>Arsenic</u> <u>(g/hr)</u>	<u>Cadmium</u> <u>(g/hr)</u>	<u>Chromium</u> <u>(g/hr)</u>	<u>Beryllium</u> <u>(g/hr)</u>
<u>4</u>	<u>1.1E-01</u>	<u>2.6E-01</u>	<u>4.0E-02</u>	<u>2.0E-01</u>
<u>115</u>	<u>1.7E+01</u>	<u>4.0E+01</u>	<u>6.0E+00</u>	<u>3.0E+01</u>
<u>120</u>	<u>1.9E+01</u>	<u>4.4E+01</u>	<u>6.4E+00</u>	<u>3.3E+01</u>

APPENDIX XVII

<u>Tier I - Feed Rate Screening Limits for Total Chlorine</u>			
<u>Terrain-Adjusted Effective Stack Heights (TESH)</u> <u>(meters)</u>	<u>Noncomplex Terrain</u>		<u>Complex</u> <u>Terrain</u>
	<u>Urban</u> <u>(g/hr)</u>	<u>Rural</u> <u>(g/hr)</u>	<u>(g/hr)</u>
<u>4</u>	<u>8.2E+01</u>	<u>4.2E+01</u>	<u>1.9E+01</u>
<u>6</u>	<u>9.1E+01</u>	<u>4.8E+01</u>	<u>2.8E+01</u>
<u>8</u>	<u>1.0E+02</u>	<u>5.3E+01</u>	<u>4.1E+01</u>
<u>10</u>	<u>1.2E+02</u>	<u>6.2E+01</u>	<u>5.8E+01</u>
<u>12</u>	<u>1.3E+02</u>	<u>7.7E+01</u>	<u>7.2E+01</u>
<u>14</u>	<u>1.5E+02</u>	<u>9.1E+01</u>	<u>9.1E+01</u>
<u>16</u>	<u>1.7E+02</u>	<u>1.2E+02</u>	<u>1.1E+02</u>
<u>18</u>	<u>1.9E+02</u>	<u>1.4E+02</u>	<u>1.2E+02</u>
<u>20</u>	<u>2.1E+02</u>	<u>1.8E+02</u>	<u>1.3E+02</u>
<u>22</u>	<u>2.4E+02</u>	<u>2.3E+02</u>	<u>1.4E+02</u>
<u>24</u>	<u>2.7E+02</u>	<u>2.9E+02</u>	<u>1.6E+02</u>
<u>26</u>	<u>3.1E+02</u>	<u>3.7E+02</u>	<u>1.7E+02</u>
<u>28</u>	<u>3.5E+02</u>	<u>4.7E+02</u>	<u>1.9E+02</u>
<u>30</u>	<u>3.9E+02</u>	<u>5.8E+02</u>	<u>2.1E+02</u>
<u>35</u>	<u>5.3E+02</u>	<u>9.6E+02</u>	<u>2.6E02</u>
<u>40</u>	<u>6.2E+02</u>	<u>1.4E+03</u>	<u>3.3E+02</u>
<u>45</u>	<u>8.2E+02</u>	<u>2.0E+03</u>	<u>4.0E+02</u>
<u>50</u>	<u>1.1E+03</u>	<u>2.6E+03</u>	<u>4.8E+02</u>
<u>55</u>	<u>1.3E+03</u>	<u>3.5E+03</u>	<u>6.3E+02</u>
<u>60</u>	<u>1.6E+03</u>	<u>4.6E+03</u>	<u>7.7E+02</u>
<u>65</u>	<u>2.0E+03</u>	<u>6.2E+03</u>	<u>9.1E+02</u>
<u>70</u>	<u>2.3E+03</u>	<u>7.2E+03</u>	<u>1.1E+03</u>
<u>75</u>	<u>2.5E+03</u>	<u>8.6E+03</u>	<u>1.2E+03</u>
<u>80</u>	<u>2.9E+03</u>	<u>1.0E+04</u>	<u>1.3E+03</u>
<u>85</u>	<u>3.3E+03</u>	<u>1.2E+04</u>	<u>1.4E+03</u>
<u>90</u>	<u>3.7E+03</u>	<u>1.4E+04</u>	<u>1.6E+03</u>
<u>95</u>	<u>4.2E+03</u>	<u>1.7E+04</u>	<u>1.8E+03</u>
<u>100</u>	<u>4.8E+03</u>	<u>2.1E+04</u>	<u>2.0E+03</u>
<u>105</u>	<u>5.3E+03</u>	<u>2.4E+04</u>	<u>2.3E+03</u>

Tier I - Feed Rate Screening Limits for Total Chlorine

<u>Terrain-Adjusted Effective Stack Heights (TESH)</u> <u>(meters)</u>	<u>Noncomplex Terrain</u>		<u>Complex</u> <u>Terrain</u>
	<u>Urban</u> <u>(g/hr)</u>	<u>Rural</u> <u>(g/hr)</u>	<u>(g/hr)</u>
<u>110</u>	<u>6.2E+03</u>	<u>2.9E+04</u>	<u>2.5E+03</u>
<u>115</u>	<u>7.2E+03</u>	<u>3.5E+04</u>	<u>2.8E+03</u>
<u>120</u>	<u>8.2E+03</u>	<u>4.1E+04</u>	<u>3.2E+03</u>

APPENDIX XVIII

Tier II- Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride						
<u>Terrain-Adjusted Effective Stack Heights (TESH) (meters)</u>	<u>Noncomplex Terrain</u>				<u>Complex Terrain</u>	
	<u>Values for Urban Areas</u>		<u>Values for Rural Areas</u>		<u>Values for Use in Urban Areas and Rural Areas</u>	
	<u>Cl₂ (g/hr)</u>	<u>HCl (g/hr)</u>	<u>Cl₂ (g/hr)</u>	<u>HCl (g/hr)</u>	<u>Cl₂ (g/hr)</u>	<u>HCl (g/hr)</u>
4	8.2E+01	1.4E+03	4.2E+01	7.3E+02	1.9E+01	3.3E+02
6	9.1E+01	1.6E+03	4.8E+01	8.3E+02	2.8E+01	4.9E+02
8	1.0E+02	1.8E+03	5.3E+01	9.2E+02	4.1E+01	7.1E+02
10	1.2E+02	2.0E+03	6.2E+01	1.1E+03	5.8E+01	1.0E+03
12	1.3E+02	2.3E+03	7.7E+01	1.3E+03	7.2E+01	1.3E+03
14	1.5E+02	2.6E+03	9.1E+01	1.6E+03	9.1E+01	1.6E+03
16	1.7E+02	2.9E+03	1.2E+02	2.0E+03	1.1E+02	1.8E+03
18	1.9E+02	3.3E+03	1.4E+02	2.5E+03	1.2E+02	2.0E+03
20	2.1E+02	3.7E+03	1.8E+02	3.1E+03	1.3E+02	2.3E+03
22	2.4E+02	4.2E+03	2.3E+02	3.9E+03	1.4E+02	2.4E+03
24	2.7E+02	4.8E+03	2.9E+02	5.0E+03	1.6E+02	2.8E+03
26	3.1E+02	5.4E+03	3.7E+02	6.5E+03	1.7E+02	3.0E+03
28	3.5E+02	6.0E+03	4.7E+02	8.1E+03	1.9E+02	3.4E+03
30	3.9E+02	6.9E+03	5.8E+02	1.0E+04	2.1E+02	3.7E+03
35	5.3E+02	9.2E+03	9.6E+02	1.7E+04	2.6E+02	4.6E+03
40	6.2E+02	1.1E+04	1.4E+03	2.5E+04	3.3E+02	5.7E+03
45	8.2E+02	1.4E+04	2.0E+03	3.5E+04	4.0E+02	7.0E+03
50	1.1E+03	1.8E+04	2.6E+03	4.6E+04	4.8E+02	8.4E+03
55	1.3E+03	2.3E+04	3.5E+03	6.1E+04	6.2E+02	1.1E+04
60	1.6E+03	2.9E+04	4.6E+03	8.1E+04	7.7E+02	1.3E+04
65	2.0E+03	3.4E+04	6.2E+03	1.1E+05	9.1E+02	1.6E+04
70	2.3E+03	3.9E+04	7.2E+03	1.3E+05	1.1E+03	1.8E+04
75	2.5E+03	4.5E+04	8.6E+03	1.5E+05	1.2E+03	2.0E+04
80	2.9E+03	5.0E+04	1.0E+04	1.8E+05	1.3E+03	2.3E+04
85	3.3E+03	5.8E+04	1.2E+04	2.2E+05	1.4E+03	2.5E+04
90	3.7E+03	6.6E+04	1.4E+04	2.5E+05	1.6E+03	2.9E+04
95	4.2E+03	7.4E+04	1.7E+04	3.0E+05	1.8E+03	3.2E+04
100	4.8E+03	8.4E+04	2.1E+04	3.6E+05	2.0E+03	3.5E+04
105	5.3E+03	9.2E+04	2.4E+04	4.3E+05	2.3E+03	3.9E+04
110	6.2E+03	1.1E+05	2.9E+04	5.1E+05	2.5E+03	4.5E+04
115	7.2E+03	1.3E+05	3.5E+04	6.1E+05	2.8E+03	5.0E+04
120	8.2E+03	1.4E+05	4.1E+04	7.2E+05	3.2E+03	5.6E+04

APPENDIX XIX

<u>Reference Air Concentrations*</u>		
<u>Constituent</u>	<u>CAS No.</u>	<u>Reference Air Concentraion ($\mu\text{g}/\text{m}^3$)</u>
<u>Acetaldehyde</u>	<u>75-07-0</u>	<u>10</u>
<u>Acetonitrile</u>	<u>75-05-8</u>	<u>10</u>
<u>Acetophenone</u>	<u>98-86-2</u>	<u>100</u>
<u>Acrolein</u>	<u>107-02-8</u>	<u>20</u>
<u>Aldicarb</u>	<u>116-06-3</u>	<u>1</u>
<u>Aluminum Phosphide</u>	<u>20859-73-8</u>	<u>0.3</u>
<u>Allyl Alcohol</u>	<u>107-18-6</u>	<u>5</u>
<u>Antimony</u>	<u>7440-36-0</u>	<u>0.3</u>
<u>Barium</u>	<u>7440-39-3</u>	<u>50</u>
<u>Barium Cyanide</u>	<u>542-62-1</u>	<u>50</u>
<u>Bromomethane</u>	<u>74-83-9</u>	<u>0.8</u>
<u>Calcium Cyanide</u>	<u>592-01-8</u>	<u>30</u>
<u>Carbon Disulfide</u>	<u>75-15-0</u>	<u>200</u>
<u>Chloral</u>	<u>75-87-6</u>	<u>2</u>
<u>Chlorine (free)</u>		<u>0.4</u>
<u>2-Chloro-1,3-butadiene</u>	<u>126-99-8</u>	<u>3</u>
<u>Chromium III</u>	<u>16065-83-1</u>	<u>1000</u>
<u>Copper Cyanide</u>	<u>544-92-3</u>	<u>5</u>
<u>Cresols</u>	<u>1319-77-3</u>	<u>50</u>
<u>Cumene</u>	<u>98-82-8</u>	<u>1</u>
<u>Cyanide (free)</u>	<u>57-12-15</u>	<u>20</u>
<u>Cyanogen</u>	<u>460-19-5</u>	<u>30</u>
<u>Cyanogen Bromide</u>	<u>506-68-3</u>	<u>80</u>
<u>Di-n-butyl Phthalate</u>	<u>84-74-2</u>	<u>100</u>
<u>o-Dichlorobenzene</u>	<u>95-50-1</u>	<u>10</u>
<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>10</u>
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>200</u>
<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>3</u>
<u>Diethyl Phthalate</u>	<u>84-66-2</u>	<u>800</u>
<u>Dimethoate</u>	<u>60-51-5</u>	<u>0.8</u>
<u>2,4-Dinitrophenol</u>	<u>51-28-5</u>	<u>2</u>
<u>Dinoseb</u>	<u>88-85-7</u>	<u>0.9</u>

Reference Air Concentrations*		
<u>Constituent</u>	<u>CAS No.</u>	<u>Reference Air Concentraion ($\mu\text{g}/\text{m}^3$)</u>
<u>Diphenylamine</u>	<u>122-39-4</u>	<u>20</u>
<u>Endosulfan</u>	<u>115-29-1</u>	<u>0.05</u>
<u>Endrin</u>	<u>72-20-8</u>	<u>0.3</u>
<u>Fluorine</u>	<u>7782-41-4</u>	<u>50</u>
<u>Formic Acid</u>	<u>64-18-6</u>	<u>2000</u>
<u>Glycidyaldehyde</u>	<u>765-34-4</u>	<u>0.3</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>5</u>
<u>Hexachlorophene</u>	<u>70-30-4</u>	<u>0.3</u>
<u>Hydrocyanic Acid</u>	<u>74-90-8</u>	<u>20</u>
<u>Hydrogen Chloride</u>	<u>7647-01-1</u>	<u>7</u>
<u>Hydrogen Sulfide</u>	<u>7783-06-4</u>	<u>3</u>
<u>Isobutyl Alcohol</u>	<u>78-83-1</u>	<u>300</u>
<u>Lead</u>	<u>7439-92-1</u>	<u>0.09</u>
<u>Maleic Anhydride</u>	<u>108-31-6</u>	<u>100</u>
<u>Mercury</u>	<u>7439-97-6</u>	<u>0.3</u>
<u>Methacrylonitrile</u>	<u>126-98-7</u>	<u>0.1</u>
<u>Methomyl</u>	<u>16752-77-5</u>	<u>20</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>50</u>
<u>Methyl Chlorocarbonate</u>	<u>79-22-1</u>	<u>1000</u>
<u>Methyl Ethyl Ketone</u>	<u>78-93-3</u>	<u>80</u>
<u>Methyl Parathion</u>	<u>298-00-0</u>	<u>0.3</u>
<u>Nickel Cyanide</u>	<u>557-19-7</u>	<u>20</u>
<u>Nitric Oxide</u>	<u>10102-43-9</u>	<u>100</u>
<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>0.8</u>
<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>0.8</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>30</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>30</u>
<u>M-Phenylenediamine</u>	<u>108-45-2</u>	<u>5</u>
<u>Phenylmercuric Acetate</u>	<u>62-38-4</u>	<u>0.075</u>
<u>Phosphine</u>	<u>7803-51-2</u>	<u>0.3</u>
<u>Phthalic Anhydride</u>	<u>85-44-9</u>	<u>2000</u>
<u>Potassium Cyanide</u>	<u>151-50-8</u>	<u>50</u>
<u>Potassium Silver Cyanide</u>	<u>506-61-6</u>	<u>200</u>

Reference Air Concentrations*		
<u>Constituent</u>	<u>CAS No.</u>	<u>Reference Air Concentraion ($\mu\text{g}/\text{m}^3$)</u>
<u>Pyridine</u>	<u>110-86-1</u>	<u>1</u>
<u>Selenious Acid</u>	<u>7783-60-8</u>	<u>3</u>
<u>Selenourea</u>	<u>630-10-4</u>	<u>5</u>
<u>Silver</u>	<u>7440-22-4</u>	<u>3</u>
<u>Silver Cyanide</u>	<u>506-64-9</u>	<u>100</u>
<u>Sodium Cyanide</u>	<u>143-33-9</u>	<u>30</u>
<u>Strychnine</u>	<u>57-24-9</u>	<u>0.3</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>0.3</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>30</u>
<u>Tetraethyl Lead</u>	<u>78-00-2</u>	<u>0.0001</u>
<u>Tetrahydrofuran</u>	<u>109-99-9</u>	<u>10</u>
<u>Thallic Oxide</u>	<u>1314-32-5</u>	<u>0.3</u>
<u>Thallium</u>	<u>7440-28-0</u>	<u>0.5</u>
<u>Thallium (I) Acetate</u>	<u>563-68-8</u>	<u>0.5</u>
<u>Thallium (I) Carbonate</u>	<u>6533-73-9</u>	<u>0.3</u>
<u>Thallium (I) Chloride</u>	<u>7791-12-0</u>	<u>0.3</u>
<u>Thallium (I) Nitrate</u>	<u>10102-45-1</u>	<u>0.5</u>
<u>Thallium Selenite</u>	<u>12039-52-0</u>	<u>0.5</u>
<u>Thallium (I) Sulfate</u>	<u>7446-18-6</u>	<u>0.075</u>
<u>Thiram</u>	<u>137-26-8</u>	<u>5</u>
<u>Toluene</u>	<u>108-88-3</u>	<u>300</u>
<u>1,2,4-Trichlorobenzene</u>	<u>120-82-1</u>	<u>20</u>
<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>300</u>
<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>100</u>
<u>Vanadium Pentoxide</u>	<u>1314-62-1</u>	<u>20</u>
<u>Warfarin</u>	<u>81-81-2</u>	<u>0.3</u>
<u>Xylenes</u>	<u>1330-20-7</u>	<u>80</u>
<u>Zinc Cyanide</u>	<u>557-21-1</u>	<u>50</u>
<u>Zinc Phosphide</u>	<u>1314-84-7</u>	<u>0.3</u>

*The reference air concentration for other appendix V of chapter 33.1-24-02 constituents not listed herein or in appendix XX of chapter 33.1-24-05 is $0.1 \mu\text{g}/\text{m}^3$.

APPENDIX XX

Risk Specific Doses (10⁻⁵)

<u>Constituent</u>	<u>CAS No.</u>	<u>Unit Risk (m³/μg)</u>	<u>RSD (μg/m³)</u>
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz(a)anthracene	56-55-3	8.9E-04	1.1E-02
Benzene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo(a)pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl)ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)-phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon Tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E+00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz(a,h)anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloro-propane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Dieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstilbestrol	56-53-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E+00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03

Constituent	CAS No.	Unit Risk (m³/µg)	RSD (µg/m³)
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>4.9E-04</u>	<u>2.0E-02</u>
<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>2.0E-05</u>	<u>5.0E-01</u>
<u>Alpha-hexachloro-cyclo-hexane</u>	<u>319-84-6</u>	<u>1.8E-03</u>	<u>5.6E-03</u>
<u>Beta-hexachloro-cyclo-hexane</u>	<u>319-85-7</u>	<u>5.3E-04</u>	<u>1.9E-02</u>
<u>Gamma-hexachloro-cyclo-hexane</u>	<u>58-89-9</u>	<u>3.8E-04</u>	<u>2.6E-02</u>
<u>Hexachlorocyclohexane, Technical</u>		<u>5.1E-04</u>	<u>2.0E-02</u>
<u>Hexachlorodibenzo-p-dioxin (1.2 Mixture)</u>		<u>1.3E+0</u>	<u>7.7E-06</u>
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>4.0E-06</u>	<u>2.5E+00</u>
<u>Hydrazine</u>	<u>302-01-2</u>	<u>2.9E-03</u>	<u>3.4E-03</u>
<u>Hydrazine Sulfate</u>	<u>302-01-2</u>	<u>2.9E-03</u>	<u>3.4E-03</u>
<u>3-Methylcholanthrene</u>	<u>56-49-5</u>	<u>2.7E-03</u>	<u>3.7E-03</u>
<u>Methyl Hydrazine</u>	<u>60-34-4</u>	<u>3.1E-04</u>	<u>3.2E-02</u>
<u>Methylene Chloride</u>	<u>75-09-2</u>	<u>4.1E-06</u>	<u>2.4E+00</u>
<u>4,4'-Methylene-bis-2-chloroaniline</u>	<u>101-14-4</u>	<u>4.7E-05</u>	<u>2.1E-01</u>
<u>Nickel</u>	<u>7440-02-0</u>	<u>2.4E-04</u>	<u>4.2E-02</u>
<u>Nickel Refinery Dust</u>	<u>7440-02-0</u>	<u>2.4E-04</u>	<u>4.2E-02</u>
<u>Nickel Sub sulfide</u>	<u>12035-72-2</u>	<u>4.8E-04</u>	<u>2.1E-02</u>
<u>2-Nitropropane</u>	<u>79-46-9</u>	<u>2.7E-02</u>	<u>3.7E-04</u>
<u>N-Nitroso-n-butylamine</u>	<u>924-16-3</u>	<u>1.6E-03</u>	<u>6.3E-03</u>
<u>N-Nitroso-n-methylurea</u>	<u>684-93-5</u>	<u>8.6E-02</u>	<u>1.2E-04</u>
<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>4.3E-02</u>	<u>2.3E-04</u>
<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>6.1E-04</u>	<u>1.6E-02</u>
<u>Pentachloronitrobenzene</u>	<u>82-68-8</u>	<u>7.3E-05</u>	<u>1.4E-01</u>
<u>PCBs</u>	<u>1336-36-3</u>	<u>1.2E-03</u>	<u>8.3E-03</u>
<u>Pronamide</u>	<u>23950-58-5</u>	<u>4.6E-06</u>	<u>2.2E+00</u>
<u>Reserpine</u>	<u>50-55-5</u>	<u>3.0E-03</u>	<u>3.3E-03</u>
<u>2,3,7,8-Tetrachloro-dibenzo-p-dioxin</u>	<u>1746-01-6</u>	<u>4.5E+01</u>	<u>2.2E-07</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>79-34-5</u>	<u>5.8E-05</u>	<u>1.7E-01</u>
<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>4.8E-07</u>	<u>2.1E+01</u>
<u>Thiourea</u>	<u>62-56-6</u>	<u>5.5E-04</u>	<u>1.8E-02</u>
<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>1.6E-05</u>	<u>6.3E-01</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>1.3E-06</u>	<u>7.7E+00</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>5.7E-06</u>	<u>1.8E+00</u>
<u>Toxaphene</u>	<u>8001-35-2</u>	<u>3.2E-04</u>	<u>3.1E-02</u>
<u>Vinyl Chloride</u>	<u>75-01-4</u>	<u>7.1E-06</u>	<u>1.4E+00</u>

APPENDIX XXI

Stack Plume Rise: [Estimated Plume Rise (In Meters) Based on Stack Exit Flow Rate and Gas Temperature]

Flow Rate (m ³ /s)	Exhaust Temperature (K°)										
	<325	325- 349	350- 399	400- 449	450- 499	500- 599	600- 699	700- 799	800- 999	1000- 1499	>1499
<0.5	0	0	0	0	0	0	0	0	0	0	0
0.5-0.9	0	0	0	0	0	0	0	0	1	1	1
1.0-1.9	0	0	0	0	1	1	2	3	3	3	4
2.0-2.9	0	0	1	3	4	4	6	6	7	8	9
3.0-3.9	0	1	2	5	6	7	9	10	11	12	13
4.0-4.9	1	2	4	6	8	10	12	13	14	15	17
5.0-7.4	2	3	5	8	10	12	14	16	17	19	21
7.5-9.9	3	5	8	12	15	17	20	22	22	23	24
10.0-12.4	4	6	10	15	19	21	23	24	25	26	27
12.5-14.9	4	7	12	18	22	23	25	26	27	28	29
15.0-19.9	5	8	13	20	23	24	26	27	28	29	31
20.0-24.9	6	10	17	23	25	27	29	30	31	32	34
25.0-29.9	7	12	20	25	27	29	31	32	33	35	36
30.0-34.9	8	14	22	26	29	31	33	35	36	37	39
35.0-39.9	9	16	23	28	30	32	35	36	37	39	41
40.0-49.9	10	17	24	29	32	34	36	38	39	41	42
50.0-59.9	12	21	26	31	34	36	39	41	42	44	46
60.0-69.9	14	22	27	33	36	39	42	43	45	47	49
70.0-79.9	16	23	29	35	38	41	44	46	47	49	51
80.0-89.9	17	25	30	36	40	42	46	48	49	51	54
90.0-99.9	19	26	31	38	42	44	48	50	51	53	56
100.0-119.9	21	26	32	39	43	46	49	52	53	55	58
120.0-139.9	22	28	35	42	46	49	52	55	56	59	61
140.0-159.9	23	30	36	44	48	51	55	58	59	62	65
160.0-179.9	25	31	38	46	50	54	58	60	62	65	67
180.0-199.9	26	32	40	48	52	56	60	63	65	67	70
>199.9	26	33	41	49	54	58	62	65	67	69	73

APPENDIX XXII

Health-Based Limits for Exclusion of Waste-Derived Residues*

Metals-TCLP Extract Concentration Limits:

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits (mg/l)</u>
<u>Antimony</u>	<u>7440-36-0</u>	<u>1xE+00</u>
<u>Arsenic</u>	<u>7440-38-2</u>	<u>5xE+00</u>
<u>Barium</u>	<u>7440-39-3</u>	<u>1xE+02</u>
<u>Beryllium</u>	<u>7440-41-7</u>	<u>7XE-03</u>
<u>Cadmium</u>	<u>7440-43-9</u>	<u>1xE+00</u>
<u>Chromium</u>	<u>7440-47-3</u>	<u>5xE+00</u>
<u>Lead</u>	<u>7439-92-1</u>	<u>5xE+00</u>
<u>Mercury</u>	<u>7439-97-6</u>	<u>2xE-01</u>
<u>Nickel</u>	<u>7440-02-0</u>	<u>7xE+01</u>
<u>Selenium</u>	<u>7782-49-2</u>	<u>1xE+00</u>
<u>Silver</u>	<u>7440-22-4</u>	<u>5xE+00</u>
<u>Thallium</u>	<u>7440-28-0</u>	<u>7xE+00</u>

Nonmetals-Residue Concentration Limits:

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Acetonitrile</u>	<u>75-05-8</u>	<u>2xE-01</u>
<u>Acetophenone</u>	<u>98-86-2</u>	<u>4xE+00</u>
<u>Acrolein</u>	<u>107-02-08</u>	<u>5xE-01</u>
<u>Acrylamide</u>	<u>79-06-1</u>	<u>2xE-04</u>
<u>Acrylonitrile</u>	<u>107-13-1</u>	<u>7xE-04</u>
<u>Aldrin</u>	<u>309-00-2</u>	<u>2xE-05</u>
<u>Allyl alcohol</u>	<u>107-18-6</u>	<u>2xE-01</u>
<u>Aluminum phosphide</u>	<u>20859-73-8</u>	<u>1xE-02</u>
<u>Aniline</u>	<u>62-53-3</u>	<u>6xE-02</u>
<u>Barium cyanide</u>	<u>542-62-1</u>	<u>1xE+00</u>
<u>Benz(a)anthracene</u>	<u>56-55-3</u>	<u>1xE-04</u>
<u>Benzene</u>	<u>71-43-2</u>	<u>5xE-03</u>
<u>Benzidine</u>	<u>92-87-5</u>	<u>1xE-06</u>
<u>Bis(2-chloroethyl) ether</u>	<u>111-44-4</u>	<u>3xE-04</u>
<u>Bis(chloromethyl) ether</u>	<u>542-88-1</u>	<u>2xE-06</u>
<u>Bis(2-ethylhexyl) phthalate</u>	<u>117-81-7</u>	<u>3xE+01</u>
<u>Bromoform</u>	<u>75-25-2</u>	<u>7xE-01</u>
<u>Calcium cyanide</u>	<u>592-01-8</u>	<u>1xE-06</u>
<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>4xE+00</u>
<u>Carbon tetrachloride</u>	<u>56-23-5</u>	<u>5xE-03</u>
<u>Chlordane</u>	<u>57-74-9</u>	<u>3xE-04</u>
<u>Chlorobenzene</u>	<u>108-90-7</u>	<u>1xE+00</u>
<u>Chloroform</u>	<u>67-66-3</u>	<u>6xE-02</u>
<u>Copper cyanide</u>	<u>544-92-3</u>	<u>2xE-01</u>
<u>Cresols (Cresylic acid)</u>	<u>1319-77-3</u>	<u>2xE+00</u>
<u>Cyanogen</u>	<u>460-19-5</u>	<u>1xE+00</u>
<u>DDT</u>	<u>50-29-3</u>	<u>1xE-03</u>
<u>Dibenz(a,h)-anthracene</u>	<u>53-70-3</u>	<u>7xE-06</u>
<u>1,2-Dibromo-3-chloropropane</u>	<u>96-12-8</u>	<u>2xE-05</u>
<u>p-Dichlorobenzene</u>	<u>106-46-7</u>	<u>7.5xE-02</u>
<u>Dichlorodifluoromethane</u>	<u>75-71-8</u>	<u>7xE+00</u>
<u>1,1-Dichloroethylene</u>	<u>75-35-4</u>	<u>5xE-03</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>2,4-Dichlorophenol</u>	<u>120-83-2</u>	<u>1xE-01</u>
<u>1,3-Dichloropropene</u>	<u>542-75-6</u>	<u>1xE-03</u>
<u>Dieldrin</u>	<u>60-57-1</u>	<u>2xE-05</u>
<u>Diethyl phthalate</u>	<u>84-66-2</u>	<u>3xE+01</u>
<u>Diethylstilbesterol</u>	<u>56-53-1</u>	<u>7xE-07</u>
<u>Dimethoate</u>	<u>60-51-5</u>	<u>3xE-02</u>
<u>2,4-Dinitrotoluene</u>	<u>121-14-2</u>	<u>5xE-04</u>
<u>Diphenylamine</u>	<u>122-39-4</u>	<u>9xE-01</u>
<u>1,2-Diphenylhydrazine</u>	<u>122-66-7</u>	<u>5xE-04</u>
<u>Endosulfan</u>	<u>115-29-7</u>	<u>2xE-03</u>
<u>Endrin</u>	<u>72-20-8</u>	<u>2xE-04</u>
<u>Epichlorohydrin</u>	<u>106-89-8</u>	<u>4xE-02</u>
<u>Ethylene dibromide</u>	<u>106-93-4</u>	<u>4xE-07</u>
<u>Ethylene oxide</u>	<u>75-21-8</u>	<u>3xE-04</u>
<u>Fluorine</u>	<u>7782-41-4</u>	<u>4xE+00</u>
<u>Formic acid</u>	<u>64-18-6</u>	<u>7xE+01</u>
<u>Heptachlor</u>	<u>76-44-8</u>	<u>8xE-05</u>
<u>Heptachlor epoxide</u>	<u>1024-57-3</u>	<u>4xE-05</u>
<u>Hexachlorobenzene</u>	<u>118-74-1</u>	<u>2xE-04</u>
<u>Hexachlorobutadiene</u>	<u>87-68-3</u>	<u>5xE-03</u>
<u>Hexachlorocyclopentadiene</u>	<u>77-47-4</u>	<u>2xE-01</u>
<u>Hexachlorodibenzo-p-dioxins</u>	<u>19408-74-3</u>	<u>6xE-08</u>
<u>Hexachloroethane</u>	<u>67-72-1</u>	<u>3xE-02</u>
<u>Hydrazine</u>	<u>302-01-1</u>	<u>1xE-04</u>
<u>Hydrogen cyanide</u>	<u>74-90-8</u>	<u>7xE-05</u>
<u>Hydrogen sulfide</u>	<u>7783-06-4</u>	<u>1xE-06</u>
<u>Isobutyl alcohol</u>	<u>78-83-1</u>	<u>1xE+01</u>
<u>Methomyl</u>	<u>16752-77-5</u>	<u>1xE+00</u>
<u>Methoxychlor</u>	<u>72-43-5</u>	<u>1xE-01</u>
<u>3-Methylcholanthrene</u>	<u>56-49-5</u>	<u>4xE-05</u>
<u>4,4'-Methylenebis (2-chloroaniline)</u>	<u>101-14-4</u>	<u>2xE-03</u>
<u>Methylene chloride</u>	<u>75-09-2</u>	<u>5xE-02</u>
<u>Methyl ethyl ketone (MEK)</u>	<u>78-93-3</u>	<u>2xE+00</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Methyl hydrazine</u>	<u>60-34-4</u>	<u>3xE-04</u>
<u>Methyl parathion</u>	<u>298-00-0</u>	<u>2xE-02</u>
<u>Naphthalene</u>	<u>91-20-3</u>	<u>1xE+01</u>
<u>Nickel cyanide</u>	<u>557-19-7</u>	<u>7xE-01</u>
<u>Nitric oxide</u>	<u>10102-43-9</u>	<u>4xE+00</u>
<u>Nitrobenzene</u>	<u>98-95-3</u>	<u>2xE-02</u>
<u>N-Nitrosodi-n-butylamine</u>	<u>924-16-3</u>	<u>6xE-05</u>
<u>N-Nitrosodiethylamine</u>	<u>55-18-5</u>	<u>2xE-06</u>
<u>N-Nitroso-N-methylurea</u>	<u>684-93-5</u>	<u>1xE-07</u>
<u>N-Nitrosopyrrolidine</u>	<u>930-55-2</u>	<u>2xE-04</u>
<u>Pentachlorobenzene</u>	<u>608-93-5</u>	<u>3xE-02</u>
<u>Pentachloronitrobenzene (PCNB)</u>	<u>82-68-8</u>	<u>1xE-01</u>
<u>Pentachlorophenol</u>	<u>87-86-5</u>	<u>1xE+00</u>
<u>Phenol</u>	<u>108-95-2</u>	<u>1xE+00</u>
<u>Phenylmercury acetate</u>	<u>62-38-4</u>	<u>3xE-03</u>
<u>Phosphine</u>	<u>7803-51-2</u>	<u>1xE-02</u>
<u>Polychlorinated biphenyls, N.O.S.</u>	<u>1336-36-3</u>	<u>5xE-05</u>
<u>Potassium cyanide</u>	<u>151-50-8</u>	<u>2xE+00</u>
<u>Potassium silver cyanide</u>	<u>506-61-6</u>	<u>7xE+00</u>
<u>Pronamide</u>	<u>23950-58-5</u>	<u>3xE+00</u>
<u>Pyridine</u>	<u>110-86-1</u>	<u>4xE-02</u>
<u>Reserpine</u>	<u>50-55-5</u>	<u>3xE-05</u>
<u>Selenourea</u>	<u>630-10-4</u>	<u>2xE-01</u>
<u>Silver cyanide</u>	<u>506-64-9</u>	<u>4xE+00</u>
<u>Sodium cyanide</u>	<u>143-33-9</u>	<u>1xE+00</u>
<u>Strychnine</u>	<u>57-24-9</u>	<u>1xE-02</u>
<u>1,2,4,5-Tetrachlorobenzene</u>	<u>95-94-3</u>	<u>1xE-02</u>
<u>1,1,2,2-tetrachloroethane</u>	<u>79-34-5</u>	<u>2xE-03</u>
<u>Tetrachloroethylene</u>	<u>127-18-4</u>	<u>7xE-01</u>
<u>2,3,4,6-Tetrachlorophenol</u>	<u>58-90-2</u>	<u>1xE-02</u>
<u>Tetraethyl lead</u>	<u>78-00-2</u>	<u>4xE-06</u>
<u>Thiourea</u>	<u>62-56-6</u>	<u>2xE-04</u>
<u>Toluene</u>	<u>108-88-3</u>	<u>1xE+01</u>

<u>Constituent</u>	<u>CAS No.</u>	<u>Concentration Limits for Residues (mg/l)</u>
<u>Toxaphene</u>	<u>8001-35-2</u>	<u>5xE-03</u>
<u>1,1,2-Trichloroethane</u>	<u>79-00-5</u>	<u>6xE-03</u>
<u>Trichloroethylene</u>	<u>79-01-6</u>	<u>5xE-03</u>
<u>Trichloromonofluoromethane</u>	<u>75-69-4</u>	<u>1xE+01</u>
<u>2,4,5-Trichlorophenol</u>	<u>95-95-4</u>	<u>4xE+00</u>
<u>2,4,6-Trichlorophenol</u>	<u>88-06-2</u>	<u>4xE+00</u>
<u>Vanadium pentoxide</u>	<u>1314-62-1</u>	<u>7xE-01</u>
<u>Vinyl chloride</u>	<u>75-01-4</u>	<u>2xE-03</u>

*Note 1: The health-based concentration limits for appendix V of chapter 33.1-24-02 constituents for which a health-based concentration is not provided below is 2xE-06 mg/kg.

Note 2: The levels specified in this appendix and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of this appendix are administratively stayed under the condition, for those constituents specified in subdivision a of subsection 2 of section 33.1-24-05-537, that the owner or operator complies with the alternative levels defined as the land disposal restriction limits specified in section 33.1-24-05-283 for F039 nonwastewaters. See paragraph 1 of subdivision b of subsection 2 of section 33.1-24-05-537.

APPENDIX XXIII

Organic Compounds for Which Residues Must Be Analyzed

<u>Volatiles:</u>	<u>Semivolatiles:</u>
<u>Benzene</u>	<u>Bis(2-ethylhexyl)phthalate</u>
<u>Toluene</u>	<u>Naphthalene</u>
<u>Carbon tetrachloride</u>	<u>Phenol</u>
<u>Chloroform</u>	<u>Diethyl phthalate</u>
<u>Methylene chloride</u>	<u>Butyl benzyl phthalate</u>
<u>Trichloroethylene</u>	<u>2,4-Dimethylphenol</u>
<u>Tetrachloroethylene</u>	<u>o-Dichlorobenzene</u>
<u>1,1,1-Trichloroethane</u>	<u>m-Dichlorobenzene</u>
<u>Chlorobenzene</u>	<u>p-Dichlorobenzene</u>
<u>cis-1,4-Dichloro-2-butene</u>	<u>Hexachlorobenzene</u>
<u>Bromochloromethane</u>	<u>2,4,6-Trichlorophenol</u>
<u>Bromodichloromethane</u>	<u>Fluoranthene</u>
<u>Bromoform</u>	<u>o-Nitrophenol</u>
<u>Bromomethane</u>	<u>1,2,4-Trichlorobenzene</u>
<u>Methylene bromide</u>	<u>o-Chlorophenol</u>
<u>Methyl ethyl ketone</u>	<u>Pentachlorophenol</u>
	<u>Pyrene</u>
	<u>Dimethyl phthalate</u>
	<u>Mononitrobenzene</u>
	<u>2,6-Toluene diisocyanate</u>
	<u>Polychlorinated dibenzo-p-dioxins¹</u>
	<u>Polychlorinated dibenzo-furans¹</u>

¹Analyses for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzo-furans are required only for residues collected from areas downstream of the combustion chamber (for example, ductwork, boiler tubes, heat exchange surfaces, and air pollution control devices).

Note to the table: Analysis is not required for those compounds that do not have an established F039 nonwastewater concentration limit.

APPENDIX XXIV

Methods Manual for Compliance With the Boiler and Industrial Furnace Regulations

The Methods Manual for Compliance With the Boiler and Industrial Furnace Regulations is incorporated by reference in its entirety from Appendix IX to 40 Code of Federal Regulations, Part 266, effective April 17, 2015.

APPENDIX XXV

[Reserved]

APPENDIX XXVI

Lead-Bearing Materials That May Be Processed in Exempt Lead Smelters

A. Exempt Lead-Bearing Materials When Generated or Originally Produced by Lead-Associated Industries¹

<u>1. Acid dump/fill solids</u>
<u>2. Sump mud</u>
<u>3. Materials from laboratory analyses</u>
<u>4. Acid filters</u>
<u>5. Baghouse bags</u>
<u>6. Clothing (for example, coveralls, aprons, shoes, hats, gloves)</u>
<u>7. Sweepings</u>
<u>8. Air filter bags and cartridges</u>
<u>9. Respiratory cartridge filters</u>
<u>10. Shop abrasives</u>
<u>11. Stacking boards</u>
<u>12. Waste shipping containers (for example, cartons, bags, drums, cardboard)</u>
<u>13. Paper hand towels</u>
<u>14. Wiping rags and sponges</u>
<u>15. Contaminated pallets</u>
<u>16. Water treatment sludges, filter cakes, residues, and solids</u>
<u>17. Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries (for example, K069 and D008 wastes)</u>
<u>18. Spent grids, posts, and separators</u>
<u>19. Spent batteries</u>
<u>20. Lead oxide and lead oxide residues</u>
<u>21. Lead plates and groups</u>
<u>22. Spent battery cases, covers, and vents</u>
<u>23. Pasting belts</u>
<u>24. Water filter media</u>
<u>25. Cheesecloth from pasting rollers</u>
<u>26. Pasting additive bags</u>
<u>27. Asphalt paving materials</u>

¹Lead-associated industries are lead smelters, lead-acid battery manufacturing, and lead chemical manufacturing (for example, manufacturing of lead oxide or other lead compounds).

B. Exempt Lead-Bearing Materials When Generated or Originally Produced by Any Industry

1. Charging jumpers and clips

2. Platen abrasive

3. Fluff from lead wire and cable casings

4. Lead-based pigments and compounding pigment dust

APPENDIX XXVII

**Nickel or Chromium-Bearing Materials That May Be Processed in Exempt
Nickel-Chromium Recovery Furnaces**

A. Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron

1. <u>Baghouse bags</u>
2. <u>Raney nickel catalyst</u>
3. <u>Floor sweepings</u>
4. <u>Air filters</u>
5. <u>Electroplating bath filters</u>
6. <u>Wastewater filter media</u>
7. <u>Wood pallets</u>
8. <u>Disposable clothing (coveralls, aprons, hats, and gloves)</u>
9. <u>Laboratory samples and spent chemicals</u>
10. <u>Shipping containers and plastic liners from containers or vehicles used to transport nickel or chromium-containing wastes</u>
11. <u>Respirator cartridge filters</u>
12. <u>Paper hand towels</u>

B. Exempt Nickel or Chromium-Bearing Materials When Generated by Any Industry

1. <u>Electroplating wastewater treatment sludges (F006)</u>
2. <u>Nickel and/or chromium-containing solutions</u>
3. <u>Nickel, chromium, and iron catalysts</u>
4. <u>Nickel-cadmium and nickel-iron batteries</u>
5. <u>Filter cake from wet scrubber system water treatment plants in the specialty steel industry</u>
6. <u>Filter cake from nickel-chromium alloy pickling operations</u>

APPENDIX XXVIII

Mercury-Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

These are exempt mercury-bearing materials with less than five hundred parts per million of appendix V of chapter 33.1-24-02 organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon.
2. Decomposer graphite.
3. Wood.
4. Paper.
5. Protective clothing.
6. Sweepings.
7. Respiratory cartridge filters.
8. Cleanup articles.
9. Plastic bags and other contaminated containers.
10. Laboratory and process control samples.
11. K106 and other wastewater treatment plant sludge and filter cake.
12. Mercury cell sump and tank sludge.
13. Mercury cell process solids.
14. Recoverable levels of mercury contained in soil.

APPENDIX XXIX

Metal-Bearing Wastes Prohibited From Dilution in a Combustion Unit According to Subsection 3 of Section 33.1-24-05-252¹

<u>Waste Code</u>	<u>Waste Description</u>
<u>D004</u>	<u>Toxicity Characteristic for Arsenic.</u>
<u>D005</u>	<u>Toxicity Characteristic for Barium.</u>
<u>D006</u>	<u>Toxicity Characteristic for Cadmium.</u>
<u>D007</u>	<u>Toxicity Characteristic for Chromium.</u>
<u>D008</u>	<u>Toxicity Characteristic for Lead.</u>
<u>D009</u>	<u>Toxicity Characteristic for Mercury.</u>
<u>D010</u>	<u>Toxicity Characteristic for Selenium.</u>
<u>D011</u>	<u>Toxicity Characteristic for Silver.</u>
<u>F006</u>	<u>Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.</u>
<u>F007</u>	<u>Spent cyanide plating bath solutions from electroplating operations.</u>
<u>F008</u>	<u>Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.</u>
<u>F009</u>	<u>Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.</u>
<u>F010</u>	<u>Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.</u>
<u>F011</u>	<u>Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.</u>
<u>F012</u>	<u>Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.</u>
<u>F019</u>	<u>Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.</u>
<u>K002</u>	<u>Wastewater treatment sludge from the production of chrome yellow and orange pigments.</u>
<u>K003</u>	<u>Wastewater treatment sludge from the production of molybdate orange pigments.</u>
<u>K004</u>	<u>Wastewater treatment sludge from the production of zinc yellow pigments.</u>
<u>K005</u>	<u>Wastewater treatment sludge from the production of chrome green pigments.</u>
<u>K006</u>	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).</u>
<u>K007</u>	<u>Wastewater treatment sludge from the production of iron blue pigments.</u>

<u>Waste Code</u>	<u>Waste Description</u>
<u>K008</u>	<u>Oven residue from the production of chrome oxide green pigments.</u>
<u>K061</u>	<u>Emission control dust/sludge from the primary production of steel in electric furnaces.</u>
<u>K069</u>	<u>Emission control dust/sludge from secondary lead smelting.</u>
<u>K071</u>	<u>Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.</u>
<u>K100</u>	<u>Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.</u>
<u>K106</u>	<u>Sludges from the mercury cell processes for making chlorine.</u>
<u>P010</u>	<u>Arsenic acid H_3AsO_4</u>
<u>P011</u>	<u>Arsenic oxide As_2O_5</u>
<u>P012</u>	<u>Arsenic trioxide</u>
<u>P013</u>	<u>Barium cyanide</u>
<u>P015</u>	<u>Beryllium</u>
<u>P029</u>	<u>Copper cyanide $Cu(CN)$</u>
<u>P074</u>	<u>Nickel cyanide $Ni(CN)_2$</u>
<u>P087</u>	<u>Osmium tetroxide</u>
<u>P099</u>	<u>Potassium silver cyanide</u>
<u>P104</u>	<u>Silver cyanide</u>
<u>P113</u>	<u>Thallic oxide</u>
<u>P114</u>	<u>Thallium (I) selenite</u>
<u>P115</u>	<u>Thallium (I) sulfate</u>
<u>P119</u>	<u>Ammonium vanadate</u>
<u>P120</u>	<u>Vanadium oxide V_2O_5</u>
<u>P121</u>	<u>Zinc cyanide</u>
<u>U032</u>	<u>Calcium chromate</u>
<u>U145</u>	<u>Lead phosphate</u>
<u>U151</u>	<u>Mercury</u>
<u>U204</u>	<u>Selenious acid</u>
<u>U205</u>	<u>Selenium disulfide</u>
<u>U216</u>	<u>Thallium (I) chloride</u>
<u>U217</u>	<u>Thallium (I) nitrate</u>

¹A combustion unit is defined as any thermal technology subject to sections 33.1-24-05-144 through 33.1-24-05-159 or sections 33.1-24-05-525 through 33.1-24-05-549.

CHAPTER 33.1-24-06
PERMITS

Section

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<u>33.1-24-06-41</u>	<u>[Reserved]</u>
<u>33.1-24-06-42</u>	<u>[Reserved]</u>
<u>33.1-24-06-43</u>	<u>[Reserved]</u>
<u>33.1-24-06-44</u>	<u>[Reserved]</u>
<u>33.1-24-06-45</u>	<u>Standardized Permit - General Information</u>

33.1-24-06-46 [Reserved]
33.1-24-06-47 [Reserved]
33.1-24-06-48 Eligibility for a Standardized Permit
33.1-24-06-49 [Reserved]
33.1-24-06-50 [Reserved]
33.1-24-06-51 [Reserved]
33.1-24-06-52 Conditions Applicable to a Standardized Permit
33.1-24-06-53 [Reserved]
33.1-24-06-54 [Reserved]
33.1-24-06-55 [Reserved]
33.1-24-06-56 Standardized Permit Application Process
33.1-24-06-57 Standardized Permit Application
33.1-24-06-58 [Reserved]
33.1-24-06-59 [Reserved]
33.1-24-06-60 [Reserved]
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33.1-24-06-62 Certification Requirements
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33.1-24-06-65 Recordkeeping Requirements
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33.1-24-06-70 Information Required for Containers
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33.1-24-06-74 [Reserved]
33.1-24-06-75 [Reserved]
33.1-24-06-76 Information Required for Equipment
33.1-24-06-77 [Reserved]
33.1-24-06-78 [Reserved]
33.1-24-06-79 [Reserved]
33.1-24-06-80 Information Required for Air Emissions Control
33.1-24-06-81 [Reserved]
33.1-24-06-82 [Reserved]
33.1-24-06-83 [Reserved]
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33.1-24-06-85 Permit Modification
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33.1-24-06-87 [Reserved]
33.1-24-06-88 [Reserved]
33.1-24-06-89 [Reserved]
33.1-24-06-90 [Reserved]
33.1-24-06-91 [Reserved]
33.1-24-06-92 [Reserved]
33.1-24-06-93 [Reserved]
33.1-24-06-94 [Reserved]
33.1-24-06-95 [Reserved]
33.1-24-06-96 [Reserved]

33.1-24-06-97 [Reserved]

33.1-24-06-98 [Reserved]

33.1-24-06-99 [Reserved]

33.1-24-06-100 Options for Incinerators, Cement Kilns, Lightweight Aggregate Kilns, Solid Fuel Boilers, Liquid Fuel Boilers, and Hydrochloric Acid Production Furnaces to Minimize Emissions from Startup, Shutdown, and Malfunction Events

33.1-24-06-01. Application for a permit.

1. **Permit application.** Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the department as described in this section and section 33.1-24-06-17. Persons currently authorized with interim status shall apply for permits when required by the department. Persons covered by permits by rule (section 33.1-24-06-18) need not apply. Procedures for applications, issuance, and administration of emergency permits are found exclusively in section 33.1-24-06-19. Procedures for application, issuance, and administration of research, development, and demonstration permits are found exclusively in section 33.1-24-06-20. Treatment, storage, and disposal facilities that are otherwise subject to permitting and that meet the criteria in subdivision a or subdivision b may be eligible for a standardized permit under sections 33.1-24-06-45 through 33.1-24-06-85. Procedures for application and issuance of standardized permits are found in sections 33.1-24-07-40 through 33.1-24-07-54, and sections 33.1-24-06-45 through 33.1-24-06-85.

a. The facility generates hazardous waste and then nonthermally treats, or stores hazardous waste onsite in tanks, containers, or containment buildings; or

b. The facility receives hazardous waste generated offsite by a generator under the same ownership as the receiving facility, and then stores, or nonthermally treats the hazardous waste in containers, tanks, or containment buildings.

2. **Who must have a permit?** North Dakota Century Code chapter 23.1-04 requires that a permit be obtained for the treatment, storage, or disposal of any hazardous waste as identified or listed in chapter 33.1-24-02. Treatment, storage, and disposal facilities that are otherwise subject to permitting and that meet the criteria in subdivisions a and b of subsection 1 of section 33.1-24-06-48, may be eligible for a standardized permit under sections 33.1-24-06-45 through 33.1-24-06-85. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit, during any compliance period specified under section 33.1-24-05-53, including any extension of that period under subsection 3 of section 33.1-24-05-53. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure according to section 33.1-24-05-64 after January 26, 1983, must have postclosure permits, unless they demonstrate closure by removal as provided under subdivisions d and e. If a postclosure permit is required, the permit must address applicable chapter 33.1-24-05 ground water monitoring, unsaturated zone monitoring, corrective action, and postclosure care. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a postclosure permit under this section.

a. Specific inclusions. Hazardous waste permits are required for:

(1) Injection wells that dispose of hazardous waste, and associated surface facilities that treat, store, or dispose of hazardous waste (see section 33.1-24-06-20). However, the owner or operator with an underground injection control permit will be deemed to have a hazardous waste permit for the injection well itself if the owner or operator complies with requirements of subsection 1 of section 33.1-24-06-18.

(2) Treatment, storage, or disposal of hazardous waste at facilities requiring a North Dakota pollutant discharge elimination system permit. However, the owner or operator of a publicly owned treatment works receiving hazardous waste will be deemed to have a hazardous waste permit for that waste if the owner or operator complies with the requirements of subsection 2 of section 33.1-24-06-18.

b. Specific exclusions. Hazardous waste permits are not required for:

(1) Generators who accumulate hazardous waste onsite for less than time periods as provided in section 33.1-24-03-12.

(2) Farmers who dispose of pesticide containers from their own use as provided in section 33.1-24-03-40.

(3) Persons who own or operate facilities solely for the treatment, storage, or disposal of hazardous waste excluded from regulation by section 33.1-24-02-04 or 33.1-24-02-05.

(4) Owners or operators of totally enclosed treatment facilities as defined in section 33.1-24-01-04.

(5) Owners or operators of elementary neutralization units or wastewater treatment units as defined in section 33.1-24-01-04.

(6) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of section 33.1-24-03-08 at a transfer facility for a period of ten days or less.

(7) Persons mixing absorbent material and waste in a container, provided this mixing occurs at the time waste is first placed in the container, and the person complies with sections 33.1-24-05-90 and 33.1-24-05-91, and subsection 2 of section 33.1-24-05-08.

(8) Universal waste handlers and universal waste transporters as defined in section 33.1-24-01-04 managing the wastes listed below. These handlers are subject to regulation under sections 33.1-24-05-700 through 33.1-24-05-799.

(a) Batteries as described in section 33.1-24-05-702;

(b) Pesticides as described in section 33.1-24-05-703;

(c) Mercury containing equipment as described in section 33.1-24-05-704;
and

(d) Lamps as described in section 33.1-24-05-705.

(9) Immediate response activities.

(a) A person is not required to obtain a hazardous waste permit for treatment or containment activities taken during immediate response to any of the following situations:

[1] A discharge of a hazardous waste.

[2] An imminent and substantial threat of a discharge of hazardous waste.

[3] A discharge of a material which, when discharged, becomes a hazardous waste.

[4] An immediate threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in section 33.1-24-01-04.

(b) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this chapter for those activities.

(c) In the case of emergency responses involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed and its disposition.

c. Permits for less than an entire facility. The department may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

d. Closure by removal. Owners or operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination under chapter 33.1-24-05 standards must obtain a postclosure permit unless they can demonstrate to the department that the closure met the standards for closure by removal or decontamination in section 33.1-24-05-122, subsection 5 of section 33.1-24-05-167, or section 33.1-24-05-135 respectively. The demonstration may be made in the following ways:

(1) If the owner or operator has submitted a part B application for a postclosure permit, the owner or operator may request a determination, based on information contained in the application, that chapter 33.1-24-05 closure by removal standards were met. If the department believes that chapter 33.1-24-05 standards were met, the department will notify the public of this proposed decision, allow for public comment, and reach a final determination according to the procedures in subdivision e.

(2) If the owner or operator has not submitted a part B application for a postclosure permit, the owner or operator may petition the department for a determination that a postclosure permit is not required because the closure met the applicable chapter 33.1-24-05 closure standards.

(a) The petition must include data demonstrating that closure by removal or decontamination standards were met, or it must demonstrate that the unit closed under requirements that met or exceeded the chapter 33.1-24-05 closure by removal standard.

(b) The department shall approve or deny the petition according to the procedures outlined in subdivision e.

e. Procedures for closure equivalency determination.

(1) If a facility owner or operator seeks an equivalency demonstration under subdivision d, the department will provide the public, through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner or operator within thirty days from the notice. The department will also, in response to a request, or at the department's own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalence of the closure period. The department will give public notice of the hearing at least thirty days before it occurs (public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.)

(2) The department will determine whether the chapter 33.1-24-05 closure met the standards for closure by removal or decontamination in section 33.1-24-05-122, subsection 5 of section 33.1-24-05-167, or section 33.1-24-05-135 respectively within ninety days of its receipt. If the department finds that the closure did not meet the applicable chapter 33.1-24-05 standards, the department will provide the owner or operator with a written statement of the reasons why the closure failed to meet chapter 33.1-24-05 standards. The owner or operator may submit additional information in support of an equivalency demonstration within thirty days after receiving such written statement. The department will review any additional information submitted and make a final determination within sixty days.

(3) If the department determines that the facility did not close in accordance with chapter 33.1-24-05 closure by removal standards, the facility is subject to postclosure permitting requirements.

3. **Who applies?** When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit, however, the owner must also sign the permit application.

4. **Completeness.** The department will not issue a permit before receiving a complete application for a permit, except for permits by rule, or emergency permits. An application for a permit is complete when the department receives an application form and any supplemental information which is completed to the department's satisfaction. The completeness of any application for a permit shall be judged independently of the status

of any other permit application or permit for the same facility or activity. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in subsection 10. The department may deny a permit for the active life of a hazardous waste management facility or unit before receiving a complete application for a permit.

5. **Information requirements.** All applicants for hazardous waste permits shall provide the information required by section 33.1-24-06-17 to the department.

6. **Recordkeeping.** Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under this chapter for a period of at least three years from the date the application is signed.

7. **When to apply for a permit.**

a. Existing hazardous waste management facilities.

(1) Owners and operators of existing hazardous waste management facilities shall submit part A of their permit application (see subsection 1 of section 33.1-24-06-17) to the department no later than:

(a) Six months after the date of publication of rules which first require them to comply with the standards set forth in chapter 33.1-24-05; or

(b) Thirty days after the date they first become subject to the standards set forth in chapter 33.1-24-05,

whichever occurs first.

(2) The department may extend the date by which owners and operators of specified classes of existing hazardous waste management facilities must submit part A of their permit application if it finds that:

(a) There has been substantial confusion as to whether the owners and operators of such facilities were required to file a permit application; and

(b) Such confusion is attributable to ambiguities in the department's rules in chapters 33.1-24-01 through 33.1-24-05.

(3) The department may, by compliance order, extend the date by which the owner or operator of an existing hazardous waste management facility must submit part A of the permit application.

(4) The owner and operator of an existing hazardous waste management facility may be required to submit part B of the permit application at any time. Any owner or operator must be allowed at least six months from the date of request to submit the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit an application at any time.

(5) Failure to furnish a requested permit application on time or to furnish in full the information required by the application is grounds for termination of the facility's operating status under the procedures of chapter 33.1-24-07.

b. New hazardous waste management facilities.

(1) No person may begin physical construction of a new hazardous waste management facility without having submitted a complete permit application (including both part A and part B) and having received a finally effective hazardous waste permit.

(2) An application for a permit for a new hazardous waste management facility (including both part A and part B) may be filed anytime after promulgation of those standards in sections 33.1-24-05-89, et seq., applicable to such facility. The application must be submitted to the department at least one hundred eighty days before physical construction is expected to commence.

8. Updating permit applications.

a. If any owner or operator of a hazardous waste management facility has filed part A of a permit application and has not yet filed part B, the owner or operator shall amend part A of the application with the department:

(1) No later than the effective date of regulatory provisions listing or designating wastes as hazardous, if the facility is treating, storing, or disposing of any of those newly listed or designated wastes; or

(2) As necessary to comply with the provisions of section 33.1-24-06-16 for changes prior to the department making final administrative disposition of the application.

b. The owner or operator of a facility who fails to comply with the updating requirements of subdivision a is not authorized to treat, store, or dispose of those wastes not covered by a duly filed part A of the application.

9. **Reapplications.** Any hazardous waste management facility with an effective permit shall submit a new application at least one hundred eighty days before the expiration date of the effective permit unless permission for a later date has been granted by the department (the department shall not grant permission for applications to be submitted later than the expiration date of the existing permit). Any hazardous waste management facility with an effective permit and intending to be covered by a standardized permit, shall submit a notice of intent as described in subdivision a of subsection 4 of section 33.1-24-06-02, at least one hundred eighty days before the expiration date of the effective permit unless permission for a later date has been granted by the department. The department shall not grant permission for applications or notices of intent to be submitted later than the expiration date of the existing permit, except as allowed by subdivision b of subsection 4 of section 33.1-24-06-02.

10. Exposure information.

a. Any permit part B applications submitted by an owner or an operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address:

- (1) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;
 - (2) The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under paragraph 1; and
 - (3) The potential magnitude and nature of the human exposure resulting from such releases.
- b. Owners and operators of a landfill or surface impoundment who have already submitted a part B application must submit the exposure information required in subdivision a.
11. **General requirements.** The department may require a permittee or an applicant to submit information in order to establish permit conditions under subdivision b of subsection 2 of section 33.1-24-06-05 and subsection 1 of section 33.1-24-06-06.
12. If the department concludes, based on one or more of the factors listed in subdivision a that compliance with the standards of 40 CFR part 63, subpart EEE alone may not be protective of human health or the environment, the department shall require the additional information or assessments necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health or the environment, or both, resulting from both direct and indirect exposure pathways. The department may also require a permittee or applicant to provide information necessary to determine whether such assessments should be required.
- a. The department shall base the evaluation of whether compliance with the standards of 40 CFR part 63, subpart EEE alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following factors:
- (1) Particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;
 - (2) Identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants considering enforceable controls in place to limit those pollutants;
 - (3) Identities and quantities of nondioxin products of incomplete combustion most likely to be emitted and to pose significant risk based on known toxicities (confirmation of which should be made through emissions testing);
 - (4) Identities and quantities of other offsite sources of pollutants in proximity of the facility that significantly influence interpretation of a facility-specific risk assessment;
 - (5) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;

- (6) Volume and types of wastes, for example wastes containing highly toxic constituents;
- (7) Other onsite sources of hazardous air pollutants that significantly influence interpretation of the risk posed by the operation of the source in question;
- (8) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk; and
- (9) Such other factors as may be appropriate.

b. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-02. Continuation of expiring permits.

1. The conditions of an expired permit (including expired permits issued by the environmental protection agency) continue in force until the effective date of a new permit if:

- a. The permittee has submitted a timely application which is a complete application for a new permit; and
- b. The department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impractical due to time or resource constraints).

2. Effect. Permits continued under this section remain fully effective and enforceable.

3. Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit, the department may choose to do any or all of the following:

- a. Initiate enforcement action based upon the permit which has been continued.
- b. Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit.
- c. Issue a new permit with appropriate conditions.
- d. Take other actions authorized by this article.

4. Standardized permits.

a. The conditions of an expired standardized permit continue in force until the effective date of a new permit (see section 33.1-24-07-11) if:

- (1) The permittee has submitted a timely and complete notice of intent under subsection 2 of section 33.1-24-07-42 requesting coverage under a hazardous waste standardized permit; and

(2) The department, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impractical due to time or resource constraints).

b. The department may notify the owner or operator that the facility is not eligible for a standardized permit (see section 33.1-24-07-46). The conditions of the expired permit will continue in force if the information specified in subdivision a of subsection 1 is submitted within sixty days after receipt of the notification that the facility is not eligible for a standardized permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-03. Signatories to permit applications and reports.

1. **Applications.** All hazardous waste permit applications must be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section a responsible corporate officer means:

(1) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decisionmaking functions for the corporation; or

(2) The manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty persons or having gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: The department does not require specific assignments or delegations of authority to responsible corporate officers identified in paragraph 1. The department will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the department to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under paragraph 2 rather than to specific individuals.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes:

(1) The chief executive officer of the agency; or

(2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. **Reports.** All reports required by permits, and other information requested by the department must be signed by a person described in subsection 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in subsection 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the department.

3. **Changes to authorization.** If an authorization under subsection 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of subsection 2 must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. **Certification.**

a. Any persons signing a document under subsection 1 or 2 shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

b. For remedial action plans under sections 33.1-24-06-30 through 33.1-24-06-35, if the operator certifies according to subdivision a, then the owner may make the following certification instead of the certification in subdivision a:

Based on my knowledge of the conditions of the property described in the remedial action plan and my inquiry of the person or persons who manage the system referenced in the operator's certification, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-04. Conditions applicable to permits.

The following conditions apply to all hazardous waste permits. All conditions applicable to permits must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to this article must be given in the permit.

1. **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the North Dakota Century Code and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. However, the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See section 33.1-24-06-19.)
2. **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit.
3. **Need to halt or reduce activity not a defense.** It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to mitigate.** In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent any adverse impacts on human health or the environment.
5. **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.
6. **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
7. **Property rights.** This permit does not convey any property rights of any sort or any exclusive privilege.
8. **Duty to provide information.** The permittee shall furnish to the department, within a reasonable time, any relevant information which the department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the department, upon request, copies of records required to be kept by this permit.
9. **Inspection and entry.** The permittee shall allow the department, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized, any substances or parameters at any location.

10. Monitoring and records.

- a. Samples and measurements taken for the purposes of monitoring must be representative of the monitored activity.
- b. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by subdivision i of subsection 2 of section 33.1-24-05-40, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, certification, or application. This period may be extended by the request of the department at any time.
- c. Records of monitoring information must include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individuals who performed the sampling or measurements;
 - (3) The dates analyses were performed;
 - (4) The individuals who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. The permittee shall maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and, for disposal facilities, for the postclosure care period as well.

11. Signatory requirement. All applications, reports, or information submitted to the department must be signed and certified. (See section 33.1-24-06-03.)

12. Reporting requirements.

- a. Planned changes. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility.

For a new hazardous waste management facility, the permittee may not commence treatment, storage, or disposal of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility, until:

(1) The permittee has submitted to the department by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

(2) Either of the following:

(a) The department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

(b) Within fifteen days of the date of submission of the letter in paragraph 1, the permittee has not received notice from the department of the department's intent to inspect. If so, prior inspection by the department is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

b. Anticipated noncompliance. The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in section 33.1-24-06-14, until:

(1) The permittee has submitted to the department by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

(2) Complied with the following:

(a) The department has inspected the modified or newly constructed facility and finds the modified or newly constructed facility is in compliance with the conditions of the permit; or

(b) Within fifteen days of the date of submission of the letter in paragraph 1, the permittee has not received notice from the department of the department's intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

c. Transfers. This permit is not transferable to any person except after notice to the department. The department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. (See section 33.1-24-06-11; in some cases, modification or revocation and reissuance is mandatory.)

d. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

- e. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than fourteen days following each schedule date.
- f. Twenty-four-hour reporting.
- (1) The permittee shall report any noncompliance which may endanger health or the environment.
 - (2) Any information shall be provided orally within twenty-four hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally:
 - (a) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
 - (b) Any information of a release or discharge of hazardous waste, or of a fire or explosion from a hazardous waste management facility, which could threaten the environment or human health outside the facility. The description of the occurrence and its cause must include:
 - [1] Name, address, and telephone number of the owner or operator;
 - [2] Name, address, and telephone number of the facility;
 - [3] Date, time, and type of incident;
 - [4] Name and quantity of materials involved;
 - [5] The extent of injuries, if any;
 - [6] An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - [7] Estimated quantity and disposition of recovered material that resulted from the incident.
 - (3) A written submission must also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (4) The department may waive the five-day written notice requirement in favor of a written report within fifteen days.
- g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under subdivisions a, d, e, and f, at the time monitoring reports are submitted. The reports must contain the information listed in subdivision f.

- h. Manifest discrepancy reports. If a significant discrepancy in a manifest is discovered, the permittee shall attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee shall submit a letter report, including a copy of the manifest to the department.
- i. Unmanifested waste report. An unmanifested waste report must be submitted to the department within fifteen days of receipt of unmanifested waste.
- j. Biennial report. A biennial report must be submitted covering facility activities during odd-numbered calendar years.
- k. Other information. Where the permittee becomes aware that the permittee failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the department, the permittee shall promptly submit such facts or information.

13. **Information repository.** The department may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in subsection 2 of section 33.1-24-07-27. The information repository will be governed by the provisions of subsections 3 through 6 of section 33.1-24-07-27.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-05. Establishing permit conditions.

- 1. In addition to conditions required in all permits (section 33.1-24-06-04), the department shall establish conditions in permits, as required on a case-by-case basis, under section 33.1-24-06-06 (duration of permits), subsection 1 of section 33.1-24-06-07 (schedules of compliance), and section 33.1-24-06-08 (monitoring).
- 2. Additional permit conditions.
 - a. Each hazardous waste permit shall include permit conditions necessary to achieve compliance with North Dakota Century Code chapter 23.1-04 and rules, including each of the applicable requirements specified in chapter 33.1-24-05. In satisfying this provision, the department may incorporate applicable requirements of chapter 33.1-24-05 directly into the permit or establish other permit conditions that are based on this chapter.
 - b. Each permit issued shall contain terms and conditions as the department determines necessary to protect human health and the environment.
 - c. If, as the result of a assessments of other information, the department determines that conditions are necessary in addition to those required under 40 CFR parts 63, subpart EEE, chapter 33.1-24-05 to ensure protection of human health and the environment, the department shall include those terms and conditions in a hazardous waste permit for a hazardous waste combustion unit.
- 3. An applicable requirement is a statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. An applicable requirement is also any

requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in section 33.1-24-06-12.

4. New or reissued permits, and to the extent allowed under section 33.1-24-06-12, modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in this section and in section 33.1-24-06-08.

5. All permit conditions must be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-06. Duration and scope of permits.

1. Hazardous waste permits are effective for a fixed term of five years. Every five years permits must be modified as necessary to assure that the facility continues to comply with the currently applicable requirements of North Dakota Century Code sections 23.1-04-05 and 23.1-04-08, and take into account improvements in technology as well as applicable rules.

2. Except as provided in section 33.1-24-06-02, the term of a permit may not be extended by modification beyond the maximum duration specified in this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-07. Schedules of compliance.

1. The permit may, when appropriate, specify a schedule of compliance leading to compliance with North Dakota Century Code chapter 23.1-04 and its regulations.

a. Time for compliance. Any schedules of compliance under this section must require compliance as soon as possible.

b. Interim dates. Except as provided in paragraph 2 of subdivision a of subsection 2, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule must set forth interim requirements and the dates for their achievement.

(1) The time between interim dates may not exceed one year.

(2) If the time necessary for completion of any interim requirements (such as the construction of a control facility) is more than one year and is not readily divisible into stages for completion, the permit must specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

c. Reporting. The permit must be written to require that no later than fourteen days following each interim date and the final date of compliance, the permittee shall

notify the department in writing of the permittee's compliance or noncompliance with the interim or final requirements.

2. Alternative schedules of compliance. A permit applicant or permittee may cease conducting regulated activities [by receiving a terminal volume of hazardous waste and closing (and conducting postclosure care, where applicable) pursuant to applicable requirements] rather than continue to operate and meet permit requirements as follows:

a. If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:

(1) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or

(2) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.

b. If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit must contain a schedule leading to termination which will ensure timely compliance with applicable requirements.

c. If the permittee is undecided whether to cease conducting regulated activities, the department may issue or modify a permit to contain two schedules as follows:

(1) Both schedules must contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities.

(2) One schedule must lead to timely compliance with applicable requirements.

(3) The second schedule must lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements.

(4) Each permit containing two schedules must require that after the permittee has made a final decision under paragraph 1 the permittee shall (a): follow the schedule leading to compliance if the decision is to continue conducting regulated activities; or (b): follow the schedule leading to termination if the decision is to cease conducting regulated activities.

d. The applicant's or permittee's decision to cease conducting regulated activities must be evidenced by a firm public commitment satisfactory to the department such as a resolution of the board of directors of a corporation.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-08. Requirements for recording and reporting of monitoring results.

All permits shall specify:

1. Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);
2. Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring; and
3. Applicable reporting requirements based upon the impact of the regulated activity and as specified in chapter 33.1-24-05. Reporting must be no less frequent than specified in that chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-09. Considerations under other state and federal laws.

Permits must be issued in a manner and must contain conditions consistent with requirements of other applicable laws of this state and the federal government.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-10. Effect of a permit.

1. Compliance with a hazardous waste permit.
 - a. Compliance with a hazardous waste permit during its term constitutes compliance, for purposes of enforcement, with North Dakota Century Code chapter 23.1-04 except for those requirements not included in the permit which:
 - (1) Become effective by statute;
 - (2) Are promulgated under sections 33.1-24-05-250 through 33.1-24-05-299 restricting the placement of hazardous wastes in or on the land;
 - (3) Are promulgated under sections 33.1-24-05-01 through 33.1-24-05-190, 33.1-24-05-300 through 33.1-24-05-524, 33.1-24-05-550 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-819 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, construction quality assurance (CQA) programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of section 33.1-24-06-14 class 1 permit modifications; or
 - (4) Are promulgated under subparts AA, BB, or CC of 40 CFR part 265 limiting air emissions, as incorporated by reference in subsection 5 of section 33.1-24-06-16.
 - b. A permit may be modified, revoked and reissued, or terminated during the permit's term for cause as set forth in sections 33.1-24-06-12 and subsection 1 of section

33.1-24-06-13, or the permit may be modified upon the request of the permittee as set forth in section 33.1-24-06-14.

2. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.
3. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-11. Transfer of permits.

1. A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under subsection 2 or subdivision b of subsection 2 of section 33.1-24-06-12) to identify the new permittee and incorporate such other requirements as may be necessary.
2. Changes in the ownership or operational control of a facility may be made as a class 1 modification with prior written approval of the department in accordance with section 33.1-24-06-14 or as a routine change with prior approval under section 33.1-24-07-53. The new owner or operator must submit a revised permit application no later than ninety days prior to a scheduled change. A written agreement containing a specific date for transfer of permit responsibility between the current and new permittees must also be submitted to the department. When a transfer of ownership or operational control occurs, the old owner or operator shall comply with the requirements of sections 33.1-24-05-74 through 33.1-24-05-88 (financial requirements) until the new owner or operator has demonstrated that the owner or operator is complying with the requirements of those sections. The new owner or operator must demonstrate compliance with sections 33.1-24-05-74 through 33.1-24-05-88 requirements within six months of the date of the change of ownership or operational control of the facility. Upon demonstration to the department by the new owner or operator of compliance with sections 33.1-24-05-74 through 33.1-24-05-88, the department shall notify the old owner or operator that the owner or operator no longer needs to comply with sections 33.1-24-05-74 through 33.1-24-05-88 as of the date of demonstration.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-12. Modification or revocation and reissuance of permits.

When the department receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see section 33.1-24-06-04), receives a request for revocation and reissuance under section 33.1-24-07-03 or conducts a review of the permit file), the department may determine whether one or more of the causes listed in subsections 1 and 2 for modification, or revocation and reissuance, or both, exist. If cause exists, the department may modify or revoke and reissue the permit accordingly, subject to the limitations of subsection 3, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a

new term (see section 33.1-24-07-03). If cause does not exist under this section, the department may not modify or revoke and reissue the permit, except on request of the permittee. If a permit modification is requested by the permittee, the department shall approve or deny the request according to the procedures of section 33.1-24-06-14, or section 33.1-24-06-85 and sections 33.1-24-07-40 through 33.1-24-07-54. Otherwise, a draft permit must be prepared and other procedures in chapter 33.1-24-07 followed.

1. **Causes for modifications.** The following are causes for modification, but not revocation and reissuance of permits. However, the following may be causes for revocation and reissuance as well as modification when the permittee requests or agrees:

a. Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

b. Information. The department has received information that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

c. New statutory requirements or regulations. The standards or regulations on which the permit was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the permit was issued.

d. Compliance schedules. The department determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy.

e. Notwithstanding any other provision in this section, when a permit for a land disposal facility is reviewed by the department when it comes up for reissuance in accordance with section 33.1-24-06-06, the department shall modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in chapters 33.1-24-01 through 33.1-24-07.

2. **Causes for modification or revocation and reissuance.** The following are causes to modify or, alternatively, revoke and reissue a permit:

a. Cause exists for termination under section 33.1-24-06-13, and the department determines that modification or revocation and reissuance is appropriate.

b. The department has received notification (as required in the permit, see subsection 4 of section 33.1-24-06-14) of a proposed transfer of the permit.

c. The department has received notification under subsection 2 of section 33.1-24-07-42 of a facility owner's or operator's intent to be covered by a standardized permit.

3. **Facility siting.** Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-13. Termination of permits and permit denial.

1. Termination of permits.

a. The following are causes for terminating a permit during its term, or for denying a permit renewal application:

- (1) Noncompliance by the permittee with any condition of the permit;
- (2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant factors or the permittee's misrepresentation of any relevant facts at any time; or
- (3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

b. The department shall follow the applicable procedures in chapter 33.1-24-07 in terminating any permit under this section.

2. **Permit denial.** The department may, pursuant to the procedures in chapter 33.1-24-07, deny the permit application either in its entirety or as to the active life of a hazardous waste management facility or unit only.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-14. Permit modification at the request of the permittee.

1. Class 1 modifications.

a. Except as provided in subdivision b, the permittee may put into effect class 1 modifications listed in appendix I of this section under the following conditions:

- (1) The permittee must notify the department concerning the modification by certified mail or other means that establish proof of delivery within seven calendar days after the change is put into effect. This notice must specify the changes being made to permit conditions or supporting documents referenced by the permit and must explain why they are necessary. Along with the notice, the permittee must provide applicable information required by section 33.1-24-06-17 and subsections 2 and 3 of section 33.1-24-06-19.
- (2) The permittee must send a notice of the modification to all persons on the facility mailing list, maintained by the department in accordance with chapter 33.1-24-07, and the appropriate units of state and local governments, as specified in section 33.1-24-07-06. This notification must be made within ninety calendar days after the change is put into effect. For the class 1 modifications that require prior department approval, the notification must be made within ninety calendar days after the department approves the request.

- (3) Any person may request the department to review, and the department may for cause reject, any class 1 modification. The department must inform the permittee by certified mail that a class 1 modification has been rejected, explaining the reasons for the rejection. If a class 1 modification has been rejected, the permittee must comply with the original permit conditions.
- b. Class 1 permit modifications identified in appendix I by an asterisk may be made only with the prior written approval of the department.
- c. For a class 1 permit modification, the permittee may elect to follow the procedures in subsection 2 of section 33.1-24-06-14 for class 2 modifications instead of the class 1 procedures. The permittee must inform the department of this decision in the notice required in subdivision a of subsection 2 of section 33.1-24-06-14.

2. Class 2 modifications.

- a. For class 2 modifications listed in appendix I of this section, the permittee must submit a modification request to the department that:
 - (1) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;
 - (2) Identifies that the modification is a class 2 modification;
 - (3) Explains why the modification is needed; and
 - (4) Provides the applicable information required by section 33.1-24-06-17 and subsections 2 and 3 of section 33.1-24-06-19.
- b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the department and to the appropriate units of state and local government as specified in section 33.1-24-07-06 and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the department evidence of the mailing and publication. The notice must include:
 - (1) Announcement of a sixty-day comment period, in accordance with subdivision e of subsection 2 of section 33.1-24-06-14, and the name and address of a department contact to whom comments must be sent;
 - (2) Announcement of the date, time, and place for a public meeting held in accordance with subdivision d of subsection 2 of section 33.1-24-06-14;
 - (3) Name and telephone number of the permittee's contact person;
 - (4) Name and telephone number of a department contact person;
 - (5) Location where copies of the modification request and any supporting documents can be viewed and copied; and
 - (6) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the department contact person."

- c. The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.
- d. The permittee must hold a public meeting no earlier than fifteen days after the publication of the notice required in subdivision b and no later than fifteen days before the close of the sixty-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.
- e. The public must be provided sixty days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the department contact identified in the public notice.
- f. Notification request.
 - (1) No later than ninety days after receipt of the notification request, the department must:
 - (a) Approve the modification request, with or without changes, and modify the permit accordingly;
 - (b) Deny the request;
 - (c) Determine that the modification request must follow the procedures in subsection 3 of section 33.1-24-06-14 for class 3 modifications for the following reasons:
 - [1] There is significant public concern about the proposed modification;
or
 - [2] The complex nature of the change requires the more extensive procedures of class 3;
 - (d) Approve the request, with or without changes, as a temporary authorization having a term of up to one hundred eighty days; or
 - (e) Notify the permittee that the department will decide on the request within the next thirty days.
 - (2) If the department notifies the permittee of a thirty-day extension for a decision, the department must, no later than one hundred twenty days after receipt of the modification request:
 - (a) Approve the modification request with or without changes, and modify the permit accordingly;
 - (b) Deny the request; or
 - (c) Determine that the modification request must follow the procedures in subsection 3 of section 33.1-24-06-14 for class 3 modifications for the following reasons:

-
- [1] There is significant public concern about the proposed modification;
or
-
- [2] The complex nature of the change requires the more extensive procedures of class 3.
-
- (d) Approve the request, with or without changes, as a temporary authorization having a term of up to one hundred eighty days.
-
- (3) If the department fails to make one of the decisions specified in paragraph 2 by the one hundred twentieth day after receipt of the modification request, the permittee is automatically authorized to conduct the activities described in the modification request for up to one hundred eighty days, without formal department action. The authorized activities must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of section 33.1-24-06-16. If the department approves, with or without changes, or denies the modification request during the term of the temporary or automatic authorization provided for in paragraph 1, 2, or 3, such action cancels the temporary or automatic authorization.
-
- (4) The following applies:
-
- (a) In the case of an automatic authorization under paragraph 3, or a temporary authorization under subparagraph d of paragraph 1 or subparagraph d of paragraph 2, if the department has not made a final approval or denial of the modification request by the date fifty days prior to the end of the temporary or automatic authorization, the permittee must, within seven days of that time, send a notification to persons on the facility mailing list, and make a reasonable effort to notify other persons who submitted written comments on the modification request, that:
-
- [1] The permittee has been authorized temporarily to conduct the activities described in the permit modification request; and
-
- [2] Unless the department acts to give final approval or denial of the request by the end of the authorization period, the permittee will receive authorization to conduct such activities for the life of the permit.
-
- (b) If the owner or operator fails to notify the public by the date specified in subparagraph a of paragraph 4, the effective date of the permanent authorization will be deferred until fifty days after the owner or operator notifies the public.
-
- (5) Except as provided in paragraph 7, if the department does not finally approve or deny a modification request before the end of the automatic or temporary authorization period or reclassify the modification as a class 3, the permittee is authorized to conduct the activities described in the permit modification request for the life of the permit unless modified later under section 33.1-24-06-12 or 33.1-24-06-14. The activities authorized under this paragraph must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of section 33.1-24-06-16.

- (6) In making a decision to approve or deny a modification request including a decision to issue a temporary authorization or to reclassify a modification as a class 3, the department must consider all written comments submitted to the department during the public comment period and must respond in writing to all significant comments in the department's decision.
- (7) With the written consent of the permittee, the department may extend, indefinitely or for a specified period, the time periods for final approval or denial of a modification request or for reclassifying a modification as a class 3.
- g. The department may deny or change the terms of a class 2 permit modification request under paragraphs 1 through 3 of subdivision f for the following reasons:
 - (1) Modification request is incomplete;
 - (2) The requested modification does not comply with the appropriate requirements of chapter 33.1-24-05 or other applicable requirements; or
 - (3) The conditions of the modification fail to protect human health and the environment.
- h. The permittee may perform any construction associated with a class 2 permit modification request beginning sixty days after the submission of the request unless the department establishes a later date for commencing construction and informs the permittee in writing before day sixty.

3. Class 3 modifications.

- a. For class 3 modifications listed in appendix I of this section, the permittee must submit a modification request to the department that:
 - (1) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;
 - (2) Identifies that the modification is a class 3 modification;
 - (3) Explains why the modification is needed; and
 - (4) Provides the applicable information required by section 33.1-24-06-17 and subsections 2, 3, and 4 of section 33.1-24-06-19.
- b. The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the department and to the appropriate units of state and local government as specified in section 33.1-24-07-06 and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the department evidence of the mailing and publication. The notice must include:
 - (1) Announcement of a sixty-day comment period, and a name and address of a department contact to whom comments must be sent;

- (2) Announcement of the date, time, and place for a public meeting on the modification request, in accordance with subdivision d of subsection 3 of section 33.1-24-06-14;
 - (3) Name and telephone number of the permittee's contact person;
 - (4) Name and telephone number of a department contact person;
 - (5) Location where copies of the modification request and any supporting documents can be viewed and copied; and
 - (6) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the department contact person."
- c. The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.
 - d. The permittee must hold a public meeting no earlier than fifteen days after the publication of the notice required in subdivision b and no later than fifteen days before the close of the sixty-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.
 - e. The public must be provided at least sixty days to comment on modification requests. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the department contact identified in the notice.
 - f. After the conclusion of the sixty-day comment period, the department must grant or deny the permit modification request according to the permit modification procedures of chapter 33.1-24-07. In addition, the department must consider and respond to all significant written comments received during the sixty-day comment period.

4. Other modifications.

- a. In the case of modifications not explicitly listed in appendix I of this section, the permittee may submit a class 3 modification request to the department, or the permittee may request a determination by the department that the modification should be reviewed and approved as a class 1 or class 2 modification. If the permittee requests that the modification be classified as a class 1 or 2 modification, the permittee must provide the department with the necessary information to support the requested classification.
- b. The department shall make the determination described in subdivision a as promptly as practicable. In determining the appropriate class for a specific modification, the department shall consider the similarity of the modification to other modifications codified in appendix I and the following criteria:
 - (1) Class 1 modifications apply to minor changes to keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to

protect human health or the environment. In the case of class 1 modifications, the department may require prior approval.

(2) Class 2 modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to:

(a) Common variations in the types and quantities of the wastes managed under the facility permit;

(b) Technological advancement; and

(c) Changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the permit.

(3) Class 3 modifications substantially alter the facility or its operation.

5. Temporary authorizations.

a. Upon request of the permittee, the department may, without prior public notice and comment, grant the permittee a temporary authorization in accordance with this section. Temporary authorizations must have a term of not more than one hundred eighty days.

b. Temporary authorizations.

(1) The permittee may request a temporary authorization for:

(a) Any class 2 modification meeting the criteria of paragraph 2 of subdivision c; and

(b) Any class 3 modification that meets the criteria in subparagraph a or b of paragraph 2 of subdivision c; or that meets the criteria in subparagraphs c through e of paragraph 2 of subdivision c and provides improved management or treatment of a hazardous waste already listed in the facility permit.

(2) The temporary authorization request must include:

(a) A description of the activities to be conducted under the temporary authorization;

(b) An explanation of why the temporary authorization is necessary; and

(c) Sufficient information to ensure compliance with chapter 33.1-24-05 standards.

(3) The permittee must send a notice about the temporary authorization request to all persons on the facility mailing list maintained by the department and to appropriate units of state and local governments as specified in section 33.1-24-07-06. This notification must be made within seven days of submission of the authorization request.

c. The department shall approve or deny the temporary authorization as quickly as practical. To issue a temporary authorization, the department must find:

(1) The authorized activities are in compliance with the standards of chapter 33.1-24-05.

(2) The temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:

(a) To facilitate timely implementation of closure or corrective action activities;

(b) To allow treatment or storage in tanks or containers, or in containment buildings, in accordance with sections 33.1-24-05-250 through 33.1-24-05-299;

(c) To prevent disruption of ongoing waste management activities;

(d) To enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit; or

(e) To facilitate other changes to protect human health and the environment.

d. A temporary authorization may be issued for one additional term of up to one hundred eighty days provided that the permittee has requested a class 2 or 3 permit modification for the activity covered in the temporary authorization, and:

(1) The reissued temporary authorization constitutes the department's decision on a class 2 permit modification in accordance with subparagraph d of paragraph 1 of subdivision f of subsection 2 or subparagraph d of paragraph 2 of subdivision f of subsection 2; or

(2) The department determines that the reissued temporary authorization involving a class 3 permit modification request is warranted to allow the authorized activities to continue while the modification procedures of subsection 3 are conducted.

6. Public notice and appeals of permit modification decisions.

a. The department shall notify persons on the facility mailing list and appropriate units of state and local government within ten days of any decision under this section to grant or deny a class 2 or 3 permit modification request. The department shall also notify such persons within ten days after an automatic authorization for a class 2 modification goes into effect under paragraph 3 or 5 of subdivision f of subsection 2.

b. The department's decision to grant or deny a class 2 or 3 permit modification request under this section may be appealed under the permit appeal procedures of section 33.1-24-07-14.

c. An automatic authorization that goes into effect under paragraph 3 or 5 of subdivision f of subsection 2 may be appealed under the permit appeal procedure of section 33.1-24-07-14; however, the permittee may continue to conduct the activities pursuant to the automatic authorization until the appeal has been granted

pursuant to subsection 3 of section 33.1-24-07-14, notwithstanding the provisions of subsection 2 of section 33.1-24-07-11.

7. Newly regulated wastes and units.

a. The permittee is authorized to continue to manage wastes listed or identified as hazardous under chapter 33.1-24-02 or to continue to manage hazardous waste in units newly regulated as hazardous waste management units if:

(1) The unit was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit of the effective date of the final rule listing or identifying the waste, or regulating the unit;

(2) The permittee submits a class 1 modification request on or before the date on which the waste or unit becomes subject to the new requirements;

(3) The permittee is in compliance with the applicable standards of subsection 5 of section 33.1-24-06-16 and sections 33.1-24-05-191 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, and 33.1-24-05-820 through 33.1-24-05-929;

(4) The permittee also submits a complete class 2 or 3 modification request within one hundred eighty days of the effective date of the rule listing or identifying the waste or subjecting the unit to hazardous waste management standards; and

(5) In the case of land disposal units, the permittee certifies that each such unit is in compliance with all applicable ground water monitoring and financial responsibility requirements in subsection 5 of section 33.1-24-06-16 on the date twelve months after the effective date of the rule identifying or listing the waste as hazardous or regulating the unit as a hazardous waste management unit. If the owner or operator fails to certify compliance with all these requirements, the owner or operator will lose authority to operate under this subsection.

b. New wastes or units added to a facility's permit under this subsection do not constitute expansions for the purpose of the twenty-five percent capacity expansion limit for class 2 modifications.

8. Military hazardous waste munitions treatment and disposal. The permittee is authorized to continue to accept waste military munitions notwithstanding any permit conditions barring the permittee from accepting offsite wastes, if:

a. The facility was in existence as a hazardous waste facility, and the facility was already permitted to handle the waste military munitions, on the date when the waste military munitions became subject to hazardous waste regulatory requirements;

b. On or before the date when the waste military munitions become subject to hazardous waste regulatory requirements, the permittee submits a class 1 modification request to remove or amend the permit provision restricting the receipt of offsite waste munitions; and

- c. The permittee submits a complete class 2 modification request within one hundred eighty days of the date when the waste military munitions became subject to hazardous waste regulatory requirements.
9. **Permit modification list.** The department must maintain a list of all approved permit modifications and must publish a notice once a year in a statewide newspaper that an updated list is available for review.
10. **Combustion facility changes to meet 40 CFR part 63 maximum achievable control technology standards.** The following procedures apply to hazardous waste combustion facility permit modifications requested under appendix I to this section, section L(9).
- a. Facility owners or operators must have complied with the notification of intent to comply requirements of 40 CFR 63.1210 that were in effect prior to October 11, 2000 (see 40 CFR part 63 sections 63.1200 through 63.1499 revised as of July 1, 2000) in order to request a permit modification under this section for the purpose of technology changes needed to meet the standards under 40 CFR 63.1203, 63.1204, and 63.1205.
- b. Facility owners or operators must comply with the notification of intent to comply requirements of 40 CFR 63.1210(b) and 63.1212(a) before a permit modification can be requested under this section for the purpose of technology changes needed to meet the 40 CFR 63.1215, 63.1216, 63.1217, 63.1218, 63.1219, 63.1220, and 63.1221 standards promulgated on October 12, 2005.
- c. If the department does not approve or deny the requests within ninety days of receiving it, the request shall be deemed approved. The department may, at the department's discretion, extend this ninety-day deadline one time for up to thirty days by notifying the facility owner or operator.
11. **Waiver of hazardous waste permit conditions in support of transition to the 40 CFR part 63 maximum achievable control technology standards.**
- a. The owner or operator may request to have specific hazardous waste operating and emissions limits waived by submitting a class 1 permit modification request under appendix I of this section, section L(10). The owner or operator must:
- (1) Identify the specific hazardous waste permit operating and emissions limits which the owner or operator is requesting to waive;
- (2) Provide an explanation of why the changes are necessary in order to minimize or eliminate conflicts between the hazardous waste permit and maximum achievable control technology compliance; and
- (3) Discuss how the revised provisions will be sufficiently protective.
- (4) The department shall approve or deny the request within thirty days of receipt of the request. The department may, at the department's discretion, extend this thirty day deadline one time for up to thirty days by notifying the facility owner or operator.
- b. To request this modification in conjunction with maximum achievable control technology performance testing where permit limits may only be waived during

actual test events and pretesting, as defined under 40 CFR 63.1207(h)(2)(I) and (ii), for an aggregate time not to exceed seven hundred twenty-hours of operation (renewable at the discretion of the department) the owner or operator must:

- (1) Submit the modification request to the department at the same time the owner or operator submits the owner's or operator's test plans to the department; and
- (2) The department may elect to approve or deny the request contingent upon approval of the test plans.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-15. Noncompliance and program reporting by the department.

The department shall submit any reports required under this section to the environmental protection agency regional administrator. For purposes of this section only, hazardous waste permittees includes facilities with operating status defined by subsection 5 of section 33.1-24-06-16, when appropriate.

1. **Quarterly reports.** The department shall submit quarterly narrative reports for major facilities as follows:

a. Format. The report must use the following format:

- (1) An alphabetized list by permittee name. When two or more permittees have the same name, the lowest permit number must be entered first.
- (2) For each entry on a list, include the following information in the following order:
 - (a) Name, location, and permit number of the noncomplying permittee.
 - (b) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one or more of the kinds set forth in subdivision b.
 - (c) The dates and a brief description of the actions taken by the department to ensure compliance.
 - (d) Status of the instances of noncompliance with the date of the review of the status or the date of resolution.
 - (e) Any details which tend to explain or mitigate the instances of noncompliance.

b. Instances of noncompliance to be reported. Any instances of noncompliance within the following categories must be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved it need not appear in subsequent reports.

- (1) Failure to complete construction elements. When the permittee has failed to complete, by the date specified in the permit, an element of a compliance

schedule involving either planning for construction (e.g., award of a contract, preliminary plans), or a construction step (e.g., begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the requirement of the schedule within thirty days from the date a compliance schedule is due under the permit.

(2) Modifications to schedules of compliance. When a schedule of compliance in the permit has been modified under section 33.1-24-06-12 or 33.1-24-06-14 because of the permittee's noncompliance.

(3) Failure to complete or provide compliance schedule or monitoring reports. When the permittee has failed to complete or provide a report required in a permit compliance schedule (e.g., progress report or notice of noncompliance or compliance), or a monitoring report; and the permittee has not submitted the complete report within thirty days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports.

(4) Deficient reports. When the required reports provided by the permittee are so deficient as to cause misunderstanding by the department and thus impede the review of the status of compliance.

(5) Noncompliance with other permit requirements. Noncompliance must be reported in the following circumstances:

(a) Whenever the permittee has violated a permit requirement (other than reported under paragraph 1 or 2), and has not returned to compliance within forty-five days from the date reporting of noncompliance was due under the permit; or

(b) When the department determines that a pattern of noncompliance exists for a major facility permittee over the most recent four consecutive reporting periods. This pattern includes any violation of the same requirement in two consecutive reporting periods, and any violation of one or more requirements in each of four consecutive reporting periods; or

(c) When the department determines significant permit noncompliance or other significant event has occurred, such as a fire or explosion or migration of fluids into an underground source of drinking water.

(6) All other. Statistical information must be reported quarterly on all other instances of noncompliance by major facilities with permit requirements not otherwise reported under this subsection.

c. The department shall submit, in a manner and form prescribed by the regional administrator, quarterly reports concerning noncompliance by transporters (e.g., recordkeeping requirements), and by generators that send their wastes to offsite treatment, storage, or disposal facilities.

2. Annual reports.

a. Annual noncompliance report. The department shall submit statistical reports on nonmajor hazardous waste management permittees indicating the total number reviewed, the number of noncomplying nonmajor permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information must be organized to follow the types of noncompliance listed in subsection 1.

b. In addition to the annual noncompliance report, the department shall prepare a "program report" which contains information (in a manner and form prescribed by the regional administrator) on generators and transporters, and the permit status of regulated facilities. The department shall include on a biennial basis summary information on the quantities and types of hazardous waste generated, transported, stored, treated, and disposed during the preceding odd-numbered year. This summary information must be reported in a manner and form prescribed by the regional administrator and according to environmental protection agency characteristics and lists of hazardous wastes at 40 CFR part 261.

3. Schedule.

a. For all quarterly reports, on the last working day of May, August, November, and February, the department shall submit to the regional administrator information concerning noncompliance with the hazardous waste management requirements in this state in accordance with the following schedule (Reports must also be made available to the public for inspection and copying on this date):

<u>January, February, and March</u>	<u>May 31</u>
<u>April, May, and June</u>	<u>August 31</u>
<u>July, August, and September</u>	<u>November 30</u>
<u>October, November, and December</u>	<u>February 28</u>

b. For annual reports, the period shall be for one calendar year ending December thirty-first, with reports completed and available to the public no more than sixty days later.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

33.1-24-06-16. Operating status prior to final administrative disposition of the permit application.

1. [Reserved]

2. [Reserved]

3. [Reserved]

4. [Reserved]

5. During operating status prior to final administrative disposition of the permit application, owners or operators shall comply with the federal interim status standards, 40 CFR part 265 and subpart G of part 270, effective April 17, 2015.

6. Operating status prior to final administrative disposition of the permit application terminates when:

a. Final administrative disposition of a permit application, except an application for a remedial action plan under sections 33.1-24-06-30 through 33.1-24-06-35, is made; or

b. Operating status prior to final administrative disposition of the permit application is terminated as provided in paragraph 5 of subdivision a of subsection 7 of section 33.1-24-06-01.

7. Operating status prior to final administrative disposition of a permit application does not apply to any facility which has been previously denied a hazardous waste permit or if authority to operate the facility under article 33.1-24 has been previously terminated.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-17. Contents of a permit application.

1. Part A of the application must include the following information:

a. The activities conducted by the applicant which require it to obtain a hazardous waste permit.

b. Name, mailing address, and location of the facility for which the application is submitted.

c. Up to four standard industrial codes which best reflect the principal products or services provided by the facility.

d. The operator's name, address, telephone number, ownership status and status as a federal, state, private, public, or other entity.

e. A listing of all permits or construction approvals at all governmental levels received or applied for under any of the following programs:

(1) Hazardous waste management program under the Resource Conservation and Recovery Act.

(2) Underground injection control program under the Safe Drinking Water Act.

(3) North Dakota pollutant discharge elimination system program under the Clean Water Act.

(4) Prevention of significant deterioration program under the Clean Air Act.

(5) Nonattainment program under the Clean Air Act.

(6) National emissions standards for hazardous air pollutants preconstruction approval under the Clean Air Act.

(7) Dredge or fill permits under section 404 of the Clean Water Act.

(8) Other relevant environmental permits.

- f. A topographic map (or other map if a topographic map is unavailable), extending one mile [1.61 kilometers] beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area.
- g. A brief description of the nature of the business.
- h. The latitude and longitude of the facility.
- i. The name, address, and telephone number of the owner of the facility.
- j. An indication of whether the facility is new or existing and whether it is a first or revised application.
- k. For existing facilities, a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal areas.
- l. For existing facilities, photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and types of future treatment, storage, and disposal areas.
- m. A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.
- n. A specification of the hazardous wastes listed or designated under chapter 33.1-24-02 to be treated, stored, or disposed at the facility; an estimate of the quantity of such waste to be treated, stored, or disposed annually; and a general description of the processes to be used for such wastes.
- o. For hazardous debris, a description of the debris categories and contaminant categories to be treated, stored, or disposed of at the facility.

2. The information requirements for part B of the permit application presented below reflect the standards in chapter 33.1-24-05. These information requirements are necessary in order for the department to determine compliance with chapter 33.1-24-05 standards. If owners and operators of hazardous waste management facilities can demonstrate that the information required for part B of the application cannot be provided to the extent required, the department may make allowances for submission of such information on a case-by-case basis. Information required for part B of the application must be submitted to the department and signed in accordance with requirements in section 33.1-24-06-03. Certain technical data, such as design drawings and specifications, and engineering studies must be certified by a qualified professional engineer. Part B of the application includes the following (information in subdivisions a through r is required for all hazardous waste management facilities except as section 33.1-24-05-01 provides otherwise; that in subdivisions s through y and hh is additional information required for specific types of facilities; and that in subdivisions z through gg is additional information regarding protection of ground water, and is required for surface impoundments, piles,

land treatment units, and landfills, except as otherwise provided in subsection 2 of section 33.1-24-05-47):

- a. General description of the facility.
- b. Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses must contain all the information which must be known to treat, store, or dispose of the wastes properly in accordance with chapter 33.1-24-05.
- c. A copy of the waste analysis plan required by subsection 2 of section 33.1-24-05-04 and, if applicable, subsection 3 of section 33.1-24-05-04.
- d. A description of the security procedures and equipment required by section 33.1-24-05-05, or a justification demonstrating the reason for requesting a waiver of this requirement.
- e. A copy of the general inspection schedule required by subsection 2 of section 33.1-24-05-06; include, where applicable, as part of the inspection schedule, specific requirements in section 33.1-24-05-93, subsection 9 of section 33.1-24-05-106, sections 33.1-24-05-108, 33.1-24-05-120, 33.1-24-05-132, 33.1-24-05-163, 33.1-24-05-178, 33.1-24-05-302, 33.1-24-05-403, 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-428, 33.1-24-05-454, 33.1-24-05-455, 33.1-24-05-456, and 33.1-24-05-458.
- f. A justification of any request for waivers of the preparedness and prevention requirements of sections 33.1-24-05-15 through 33.1-24-05-25.
- g. A copy of the contingency plan required by sections 33.1-24-05-26 through 33.1-24-05-36. Include, where applicable, as part of the contingency plan, specific requirements in sections 33.1-24-05-98 and 33.1-24-05-121.
- h. A description of procedures, structures, or equipment used at the facility to:
 - (1) Prevent hazards in unloading operations, for example, ramps and special forklifts;
 - (2) Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding, for example, berms, dikes, and trenches;
 - (3) Prevent contamination of water supplies;
 - (4) Mitigate effects of equipment failure and power outages;
 - (5) Prevent undue exposure of personnel to hazardous waste (for example, protective clothing); and
 - (6) Prevent releases to atmosphere.
- i. A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with section 33.1-24-05-08, including documentation demonstrating compliance with subsection 3 of section 33.1-24-05-08.

- j. Traffic pattern, estimated volume (number, type of vehicles) and control, for example, show turns across traffic lanes and stacking lanes, if appropriate; describe access road, surfacing and load-bearing capacity; show traffic control signals.
- k. [Reserved]
- l. An outline of both the introductory and continuing programs by owners or operators to prepare persons to operate and maintain a hazardous waste management facility in a safe manner as required to demonstrate compliance with section 33.1-24-05-07. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in subdivision c of subsection 1 of section 33.1-24-05-07.
- m. A copy of the closure plan and where applicable, the postclosure plan required by sections 33.1-24-05-61, 33.1-24-05-67, and 33.1-24-05-110. Include, where applicable, as part of the plans, specific requirements in sections 33.1-24-05-97, 33.1-24-05-110, 33.1-24-05-122, 33.1-24-05-135, 33.1-24-05-151, 33.1-24-05-167, 33.1-24-05-180, 33.1-24-05-301, and 33.1-24-05-303.
- n. For hazardous waste disposal units that have been closed, documentation that notices required under section 33.1-24-05-68 have been filed.
- o. The most recent closure and, where applicable, postclosure cost estimate for the facility prepared in accordance with section 33.1-24-05-76 and a copy of the documentation required to demonstrate financial assurance under section 33.1-24-05-77. For a new facility, a copy of the required documentation may be submitted sixty days prior to the initial receipt of hazardous waste, if that is later than the submission of the part B application.
- p. Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of section 33.1-24-05-79. For a new facility, documentation showing the amount of insurance meeting the specification of subsection 1, and subsection 2, if applicable, of section 33.1-24-05-79, that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in subsection 3 of section 33.1-24-05-79.
- q. A topographic map showing a distance of one thousand feet [304.8 meters] around the facility at a scale of two and five-tenths centimeters [1 inch] equal to not more than sixty-one meters [200 feet]. (The department may allow the use of other scales on a case-by-case basis.) Contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of one and five-tenths meters [5 feet], if relief is greater than six and one-tenth meters [20 feet], or an interval of six-tenths meter [2 feet], if relief is less than six and one-tenth meters [20 feet]. Owners and operators of hazardous waste management facilities located in mountainous areas should use larger contour intervals to adequately show topographic profiles of the facilities. The map must clearly show the following:

- (1) Map scale and date.
 - (2) One hundred-year floodplain area.
 - (3) Surface waters including intermittent streams.
 - (4) Surrounding land uses (residential, commercial, agricultural, recreational).
 - (5) A wind rose, for example, prevailing wind speed and direction.
 - (6) Orientation of the map (north arrow).
 - (7) Legal boundaries of the hazardous waste management facility site.
 - (8) Access control (fences, gates).
 - (9) Injection and withdrawal wells, both onsite and offsite.
 - (10) Buildings; treatment, storage, or disposal operations; or other structures (recreation areas, runoff control systems, access and internal roads, storm, sanitary, and processed sewerage systems, loading and unloading areas, fire control facilities, etc.).
 - (11) Barriers for drainage or flood control.
 - (12) Location of operational units within the hazardous waste management facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).
- r. Applicants may be required to submit such information as may be necessary to enable the department to carry out the department's duties under federal or other state laws as required in section 33.1-24-06-09.
- s. For facilities that store containers of hazardous waste, except as otherwise provided in section 33.1-24-05-89:
- (1) A description of the containment system to demonstrate compliance with section 33.1-24-05-94. Show at least the following:
 - (a) Basic design parameters, dimensions, and materials of construction.
 - (b) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.
 - (c) Capacity of the containment system relative to the number and volume of containers to be stored.
 - (d) Provisions for preventing or managing run-on.
 - (e) How accumulated liquids can be analyzed and removed to prevent overflow.
 - (2) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with subsection 3 of section 33.1-24-05-94, including:

- (a) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and
- (b) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.
- (3) Sketches, drawings, or data demonstrating compliance with section 33.1-24-05-95 (location of buffer zone and containers holding ignitable or reactive wastes) and subsection 3 of section 33.1-24-05-96 (location of incompatible wastes), where applicable.
- (4) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with subsections 1 and 2 of section 33.1-24-05-96 and subsections 2 and 3 of section 33.1-24-05-08.
- (5) Information on air emission control equipment as required in subdivision hh.
- t. Except as otherwise provided in section 33.1-24-05-103, owners and operators of facilities that use tanks to store or treat hazardous waste shall provide the following additional information:
 - (1) A written assessment that is reviewed and certified by a qualified professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required under sections 33.1-24-05-104 and 33.1-24-05-105;
 - (2) Dimensions and capacity of each tank;
 - (3) Description of feed systems, safety cutoff, bypass systems, and pressure controls, for example, vents;
 - (4) A diagram of piping, instrumentation, and process flow for each tank system;
 - (5) A description of materials and equipment used to provide external corrosion protection, as required under paragraph 2 of subdivision c of subsection 1 of section 33.1-24-05-105;
 - (6) For new tank systems, a detailed description of how the tank systems will be installed in compliance with subsections 2, 3, 4, and 5 of section 33.1-24-05-105;
 - (7) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of subsections 1, 2, 3, 4, 5, and 6 of section 33.1-24-05-106;
 - (8) For tank systems for which a variance from the requirements of section 33.1-24-05-106 is sought (as provided by subsection 7 of section 33.1-24-05-106):
 - (a) Detailed plans and engineering and hydrogeologic reports, as appropriate, alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any

hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility; or

(b) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment;

(9) Description of controls and practices to prevent spills and overflows, as required under subsection 2 of section 33.1-24-05-107;

(10) For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of sections 33.1-24-05-111 and 33.1-24-05-112; and

(11) Information on air emission control equipment as required in subdivision hh.

u. For facilities that store, treat, or dispose of hazardous waste in surface impoundments, except as otherwise provided in section 33.1-24-05-01:

(1) A list of the hazardous wastes placed or to be placed in each surface impoundment.

(2) Detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated, and maintained to meet the requirements of sections 33.1-24-05-10, 33.1-24-05-119, 33.1-24-05-126, and 33.1-24-05-127. This submission must address the following items as specified in those sections.

(a) The liner system (except for an existing portion of a surface impoundment). If an exemption from the requirement for a liner system is sought as provided by subsection 2 of section 33.1-24-05-119, submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time.

(b) The double liner and leak (leachate) detection, collection, and removal system, if the surface impoundment must meet the requirements of subsection 3 of section 33.1-24-05-119. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsection 4, 5, or 6 of section 33.1-24-05-119, submit appropriate information.

(c) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system.

(d) The construction quality assurance plan if required under section 33.1-24-05-10.

(e) Proposed action leakage rate, with rationale, if required under section 33.1-24-05-126, and response action plan, if required under section 33.1-24-05-127.

(f) Prevention of overtopping.

(g) Structural integrity of dikes.

(3) A description of how each surface impoundment, including the double liner system, leak detection system, cover system, and appurtenances for control of overtopping will be inspected in order to meet the requirements of subsections 1, 2, and 4 of section 33.1-24-05-120. This information must be included in the inspection plan submitted under subdivision e.

(4) A certification by a qualified engineer which attests to the structural integrity of each dike as required under subsection 3 of section 33.1-24-05-120. For new units, the owner or operator must submit a statement by a qualified engineer that the engineer will provide such a certification upon completion of construction in accordance with the plans and specifications.

(5) A description of the procedure to be used for removing a surface impoundment from service as required under subsections 2 and 3 of section 33.1-24-05-121. This information should be included in the contingency plan submitted under subdivision g.

(6) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure as required under subdivision a of subsection 1 of section 33.1-24-05-122. For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how subsection 2 and subdivision b of subsection 1 of section 33.1-24-05-122 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan submitted under subdivision m.

(7) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how section 33.1-24-05-123 will be complied with.

(8) If incompatible wastes or incompatible wastes and materials will be placed in the surface impoundment, an explanation of how section 33.1-24-05-124 will be complied with.

(9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how the surface impoundment is or will be designed, constructed, operated, and maintained to meet the requirements of section 33.1-24-05-125. This submission must address the following items as specified in section 33.1-24-05-125:

(a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.

(b) The attenuative properties of underlying and surrounding soils or other materials.

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- (c) The mobilizing properties of other materials codisposed with these wastes.
-
- (d) The effectiveness of additional treatment, design, or monitoring techniques.
-
- (10) Information on air emission control equipment as required in subdivision hh.
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- v. For facilities that treat or store hazardous waste in waste piles, except as otherwise provided in section 33.1-24-05-01:
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- (1) A list of hazardous wastes placed, or to be placed, in each waste pile.
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- (2) If an exemption is sought to section 33.1-24-05-131 and sections 33.1-24-05-47 through 33.1-24-05-58, as provided by subsection 3 of section 33.1-24-05-130 or subdivision b of subsection 2 of section 33.1-24-05-47, an explanation of how the requirements of subsection 3 of section 33.1-24-05-130 will be complied with or detailed plans and an engineering report describing how the requirements of subdivision b of subsection 2 of section 33.1-24-05-47 will be met.
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- (3) Detailed plans and an engineering report describing how the waste pile is designed and is or will be constructed, operated, and maintained to meet the requirements of sections 33.1-24-05-10, 33.1-24-05-131, 33.1-24-05-137, and 33.1-24-05-138. This submission must address the following items as specified in those sections:
-
- (a) The liner system.
-
- [1] The liner system (except for an existing portion of a waste pile), if the waste pile must meet the requirements of subsection 1 of section 33.1-24-05-131. If an exemption from the requirement for a liner is sought as provided by subsection 2 of section 33.1-24-05-131, submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
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- [2] The double liner and leak (leachate) detection, collection, and removal system, if the waste pile must meet the requirements of subsection 2 of section 33.1-24-05-131. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsection 4, 4, or 5 of section 33.1-24-05-131, submit appropriate information;
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- [3] If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

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- [4] The construction quality assurance plan if required under section 33.1-24-05-10; and
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- [5] Proposed action leakage rate, with rationale, if required under section 33.1-24-05-137, and response action plan, if required under section 33.1-24-05-138.
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- (b) Control of run-on.
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- (c) Control of runoff.
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- (d) Management of collection and holding units associated with run-on and runoff control systems.
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- (e) Control of wind dispersal of particulate matter, where applicable.
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- (4) A description of how each waste pile, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of subsections 1, 2, and 3 of section 33.1-24-05-132. This information must be included in the inspection plan submitted under subdivision e.
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- (5) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals.
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- (6) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of section 33.1-24-05-133 will be complied with.
-
- (7) If incompatible wastes or incompatible wastes and materials will be placed in a waste pile, an explanation of how section 33.1-24-05-134 will be complied with.
-
- (8) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at the closure, as required under subsection 1 of section 33.1-24-05-135. For any wastes not to be removed from the waste pile upon closure, the owner or operator must submit detailed plans and an engineering report describing how subsections 1 and 2 of section 33.1-24-05-180 will be complied with. This information should be included in the closure plan and where applicable, the postclosure plan, submitted under subdivision m.
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- (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a waste pile that is not enclosed (as defined in subsection 3 of section 33.1-24-05-130) is or will be designed, constructed, operated, and maintained to meet the requirements of section 33.1-24-05-136. This submission must address the following items as specified in section 33.1-24-05-136:
-
- (a) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including their potential to migrate through soil or to volatilize or escape into the atmosphere.

- (b) The attenuative properties of underlying and surrounding soils or other materials.
 - (c) The mobilizing properties of other materials codisposed with these wastes.
 - (d) The effectiveness of additional treatment, design, or monitoring techniques.
- w. For facilities that incinerate hazardous waste, except as section 33.1-24-05-144 and paragraph 5 provides otherwise, the owner or operator must fulfill the requirements of paragraphs 1, 2, or 3.
- (1) When seeking an exemption under subsections 2 or 3 of section 33.1-24-05-144 (ignitable, corrosive, or reactive wastes only), submit documentation, that the waste to be burned:
 - (a) Is hazardous (either listed in sections 33.1-24-02-15 through 33.1-24-02-19 or fails the characteristic tests in sections 33.1-24-02-10 through 33.1-24-02-14) solely because it is:
 - [1] Ignitable, or corrosive, or both; or
 - [2] Listed in sections 33.1-24-02-15 through 33.1-24-02-19 as reactive for characteristics other than those in subdivisions d and e of subsection 1 of section 33.1-24-02-13, or fails the characteristic in subdivisions a, b, c, e, f, g, or h of subsection 1 of section 33.1-24-02-133, and will not be burned when other hazardous wastes are present in the combustion zone.
 - (2) Submit a trial burn plan or the results of a trial burn, including all required determinations in accordance with subsection 2 of section 33.1-24-06-19.
 - (3) In lieu of a trial burn, the applicant may submit the following information:
 - (a) An analysis of each waste or mixture of wastes to be burned, including:
 - [1] Heat value of the waste in the form and composition in which it will be burned.
 - [2] Viscosity (if applicable), or description of physical form of the waste.
 - [3] An identification of any hazardous organic constituents listed in chapter 33.1-24-02, appendix V, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in chapter 33.1-24-02, appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on appropriate analytical techniques.
 - [4] An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods.

- [5] A quantification of those hazardous constituents in the waste which may be designated as principal organic hazardous constituents based on data submitted from the other trial or operational burns which demonstrate compliance with the performance standard in section 33.1-24-05-147.
- (b) A detailed engineering description of the incinerator, including:
- [1] Manufacturer's name and model number of incinerator.
- [2] Type of incinerator.
- [3] Linear dimension of incinerator unit including cross-sectional area of combustion chamber.
- [4] Description of auxiliary fuel system (type/feed).
- [5] Capacity of prime mover.
- [6] Description of automatic waste feed cutoff systems.
- [7] Stack gas monitoring and pollution control monitoring system.
- [8] Nozzle and burner design.
- [9] Construction materials.
- [10] Location and description and temperature, pressure, and flow indicating devices and control devices.
- (c) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in subparagraph a. This analysis should specify the principal organic hazardous constituents which the applicant has identified in the waste for which a permit is sought and any differences from the principal organic hazardous constituents in the waste for which burn data are provided.
- (d) The design and operating conditions of the incinerator unit to be used, compared with that for which comparable burn data are available.
- (e) A description of the results submitted from any previously conducted trial burns, including:
- [1] Sampling and analysis techniques used to calculate performance standards in section 33.1-24-05-147.
- [2] Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement).

(f) The expected incinerator operation information to demonstrate compliance with sections 33.1-24-05-147 and 33.1-24-05-149, including:

[1] Expected carbon monoxide level in the stack exhaust gas.

[2] Waste feed rate.

[3] Combustion zone temperature.

[4] Indication of combustion gas velocity.

[5] Expected stack gas volume, flow rate, and temperature.

[6] Computed residence time for waste in the combustion zone.

[7] Expected hydrochloric acid removal efficiency.

[8] Expected fugitive emissions and their control procedures.

[9] Proposed waste feed cutoff limits based on the identified significant operating parameters.

(g) Such supplemental information as the department finds necessary to achieve the purposes of this paragraph.

(h) Waste analysis data, including that submitted in subparagraph a, sufficient to allow the department to specify as permit principal organic hazardous constituents those constituents for which destruction and removal efficiencies will be required.

(4) The department shall approve a permit application without a trial burn if the department finds that:

(a) The wastes are sufficiently similar; and

(b) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under section 33.1-24-05-149) operating conditions that will ensure that the performance standards in section 33.1-24-05-147 will be met.

(5) When an owner or operator of a hazardous waste incineration unit becomes subject to hazardous waste permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR sections 63.1207(j) and 63.1210(d) documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this subdivision do not apply, except those provisions the department determines are necessary to ensure compliance with subsections 1 and 3 of section 33.1-24-05-149 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subdivision, on

a case-by-case basis, for purposes of information collection in accordance with subsections 11 and 12 of section 33.1-24-06-01 and subdivisions b and c of subsection 2 of section 33.1-24-06-05.

x. For facilities that use land treatment to dispose of hazardous waste, except as otherwise provided in section 33.1-24-05-01:

(1) A description of plans to conduct a treatment demonstration as required under section 33.1-24-05-162. The description must include the following information:

(a) The wastes for which the demonstration will be made and the potential hazardous constituents in the waste.

(b) The data sources to be used to make the demonstration, for example, literature, laboratory data, field data, or operating data.

(c) Any specific laboratory or field test that will be conducted, including:

[1] The type of test, for example, column leaching, degradation.

[2] Materials and methods, including analytical procedures.

[3] Expected time for completion.

[4] Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

(2) A description of a land treatment program as required under section 33.1-24-05-161. This information must be submitted with the plans for the treatment demonstration and updated following the treatment demonstration. The land treatment program must address the following items:

(a) The wastes to be land treated.

(b) Design measures and operating practices necessary to maximize treatment in accordance with subsection 1 of section 33.1-24-05-163, including:

[1] Waste application method and rate.

[2] Measures to control soil pH.

[3] Enhancement of microbial or chemical reactions.

[4] Control of moisture content.

(c) Provisions for unsaturated zone monitoring, including:

[1] Sampling equipment, procedures, and frequency.

[2] Procedures for selecting sampling locations.

[3] Analytical procedures.

- [4] Chain of custody control.
- [5] Procedures for establishing background values.
- [6] Statistical methods for interpreting results.
- [7] Justification for any hazardous constituents recommended for selection as principal hazardous constituents in accordance with the criteria for such selection in subsection 1 of section 33.1-24-05-165.
- (d) A list of hazardous constituents reasonably expected to be in, or derived from, the waste to be land treated based on waste analysis performed pursuant to section 33.1-24-05-04.
- (e) The proposed dimensions of the treatment zone.
- (3) A description of how the unit is, or will be designed, constructed, operated, and maintained in order to meet the requirements of section 33.1-24-05-163. This submission must address the following items:
 - (a) Control of run-on.
 - (b) Collection and control of runoff.
 - (c) Minimization of runoff of hazardous constituents from the treatment zone.
 - (d) Management of collection and holding facilities associated with run-on and runoff control systems.
 - (e) Periodic inspection of the unit. This information should be included in the inspection plan submitted under subdivision e.
 - (f) Control of wind dispersal of particulate matter, if applicable.
- (4) If food chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under subsection 1 of section 33.1-24-05-164 will be conducted, including:
 - (a) Characteristics of the food chain crop for which the demonstration will be made.
 - (b) Characteristics of the waste treatment zone and waste application method and rate to be used in the demonstration.
 - (c) Procedures for crop growth, sample collection, sample analysis, and data evaluation.
 - (d) Characteristics of the comparison crop, including the location and conditions under which it was or will be grown.
- (5) If food chain crops are to be grown and cadmium is present in the land treated waste, a description of how the requirements of subsection 5 of section 33.1-24-05-164 will be complied with.

- (6) A description of the vegetative cover to be applied to closed portions of the facility and a plan for maintaining such cover during the postclosure care period as required under subdivision h of subsection 1 and subdivision b of subsection 3 of section 33.1-24-05-167. This information should be included in the closure plan and where applicable, the postclosure care plan submitted under subdivision m.
- (7) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of section 33.1-24-05-168 will be complied with.
- (8) If incompatible wastes or incompatible wastes or materials will be placed in or on the same treatment zone, an explanation of how section 33.1-24-05-169 will be complied with.
- (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of section 33.1-24-05-170. This submission must address the following items as specified in section 33.1-24-05-170:
- (a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
- (b) The attenuative properties of underlying and surrounding soils or other materials.
- (c) The mobilizing properties of other materials codisposed with these wastes.
- (d) The effectiveness of additional treatment, design, or monitoring techniques.
- y. For facilities that dispose of hazardous waste in landfills, except as otherwise provided in section 33.1-24-05-01:
- (1) A list of the hazardous wastes placed or to be placed in each landfill or landfill cell.
- (2) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to comply with the requirements of sections 33.1-24-05-10, 33.1-24-05-177, 33.1-24-05-178, and 33.1-24-05-187. This submission must address the following items as specified in those sections:
- (a) The liner system.
- [1] The liner system (except for an existing portion of a landfill), if the landfill must meet the requirements of subsection 1 of section 33.1-24-05-177. If an exemption from the requirement for a liner is sought as provided by subsection 2 of section 33.1-24-05-177, submit detailed plans, and engineering and hydrogeological reports, as

appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

[2] The double liner and leak (leachate) detection, collection, and removal system, if the landfill must meet the requirements of subsection 3 of section 33.1-24-05-177. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by subsections 4, 5, or 6 of section 33.1-24-05-177, submit appropriate information;

[3] If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

[4] The construction quality assurance plan if required under section 33.1-24-05-10; and

[5] Proposed action leakage rate, with rationale, if required under section 33.1-24-05-187, and response action plan, if required under section 33.1-24-05-178.

(b) Control of run-on.

(c) Control of runoff.

(d) Management of collection and holding facilities associated with run-on and runoff control systems.

(e) Control of wind dispersal of particulate matter where applicable.

(3) A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of subsections 1, 2, and 3 of section 33.1-24-05-178. This information must be included in the inspection plan submitted under subdivision e.

(4) A description of how each landfill, including the liner and cover systems will be inspected in order to meet the requirements of subsections 1 and 2 of section 33.1-24-05-178. This information should be included in the inspection plan submitted under subdivision e.

(5) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with subsection 1 of section 33.1-24-05-180 and a description of how each landfill will be maintained and monitored after closure in accordance with subsection 2 of section 33.1-24-05-180. This information should be included in the closure and postclosure plans submitted under subdivision m.

- (6) If ignitable or reactive wastes will be landfilled, an explanation of how the requirements of section 33.1-24-05-181 will be complied with.
- (7) If incompatible wastes or incompatible wastes and materials will be landfilled, an explanation of how section 33.1-24-05-182 will be complied with.
- (8) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of section 33.1-24-05-184 or 33.1-24-05-185, as applicable, will be complied with.
- (9) A waste management plan for hazardous wastes F020, F021, F022, F023, F026, and F027 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of section 33.1-24-05-186. This submission must address the following items as specified in section 33.1-24-05-186:
 - (a) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
 - (b) The attenuative properties of underlying and surrounding soils or other materials.
 - (c) The mobilizing properties of other materials codisposed with these wastes.
 - (d) The effectiveness of additional treatment, design, or monitoring techniques.
- z. [Reserved]
- aa. For land disposal facilities, if a case-by-case extension has been approved under section 33.1-24-05-254 or a petition has been approved under section 33.1-24-05-255, a copy of the notice of approval for the extension or petition is required.
- bb. Except as otherwise provided in section 33.1-24-05-300, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information:
 - (1) A detailed description of the unit being used or proposed for use, including the following:
 - (a) Physical characteristics, materials of construction, and dimensions of the unit;
 - (b) Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements of sections 33.1-24-05-301 and 33.1-24-05-302; and
 - (c) For disposal units, a detailed description of the plans to comply with the postclosure requirements of section 33.1-24-05-303.

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- (2) Detailed hydrologic, geologic, and meteorologic assessments and land use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of section 33.1-24-05-301. If the applicant can demonstrate that the applicant does not violate the environmental performance standards of section 33.1-24-05-301 and the department agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.

 - (3) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.

 - (4) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.

 - (5) Any additional information determined by the department to be necessary for evaluation of compliance of the unit with the environmental performance standards of section 33.1-24-05-301.
- cc. Except as otherwise provided in section 33.1-24-05-01, owners and operators of facilities that have process vents to which sections 33.1-24-05-400 through 33.1-24-05-419 apply must provide the following additional information:
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- (1) For facilities that cannot install a closed-vent system and control device to comply with the provisions of sections 33.1-24-05-400 through 33.1-24-05-419 on the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-400 through 33.1-24-05-419, an implementation schedule as specified in subdivision b of subsection 1 of section 33.1-24-05-403.

 - (2) Documentation of compliance with the process vent standards in section 33.1-24-05-402, including:
 - (a) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility, for example, the total emissions for all affected vents at the facility, and the approximate location within the facility of each affected unit, for example, identify the hazardous waste management units on a facility plot plan.

 - (b) Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions must be made using operating parameter values, for example, temperatures, flow rates, or concentrations, that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.

 - (c) Information and data used to determine whether or not a process vent is subject to the requirements of section 33.1-24-05-402.

- (3) If an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of section 33.1-24-05-402, and chooses to use the test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-05-405.
- (4) Documentation of compliance with section 33.1-24-05-403, including:
- (a) A list of all information references and sources used in preparing the documentation.
- (b) Records, including the dates, of each compliance test required by subsection 11 of section 33.1-24-05-403.
- (c) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI course 415: control of gaseous emissions" (incorporated by reference as specified in section 33.1-24-01-05) or other engineering texts acceptable to the department that present basic control device information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.
- (d) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.
- (e) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight percent or greater unless the total organic emission limits of subsection 1 of section 33.1-24-05-402 for affected access vents at the facility can be attained by a control device involving vapor recovery at an efficiency level less than ninety-five weight percent.
- dd. Except as otherwise provided in section 33.1-24-05-01, owners and operators of facilities that have equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 apply must provide the following additional information:
- (1) For each piece of equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 apply:
- (a) Equipment identification number and hazardous waste management unit identification.
- (b) Approximate locations within the facility, for example, identify the hazardous waste management unit on a facility plot plan.
- (c) Type of equipment, for example, a pump or pipeline valve.

(d) Percent by weight total organics in the hazardous waste stream at the equipment.

(e) Hazardous waste state at the equipment, for example, gas or vapor or liquid.

(f) Method of compliance with the standard, for example, "monthly leak detection and repairs" or "equipped with dual mechanical seals".

(2) For facilities that do not install a closed-vent system and control device to comply with the provisions of sections 33.1-24-05-420 through 33.1-24-05-449 on the effective date that the facility becomes subject to the provisions of sections 33.1-24-05-420 through 33.1-24-05-449, an implementation schedule as specified in subdivision b of subsection 1 of section 33.1-24-05-403.

(3) If an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in subdivision c of subsection 2 of section 33.1-24-05-405.

(4) Documentation that demonstrates compliance with the equipment standards in sections 33.1-24-05-422 to 33.1-24-05-429. This documentation must contain the records required under section 33.1-24-05-434. The department may request further documentation before deciding if compliance has been demonstrated.

(5) Documentation to demonstrate compliance with section 33.1-24-05-430 must include the following information:

(a) A list of all information references and sources used in preparing the documentation.

(b) Records, including the dates, of each compliance test required by subsection 10 of section 33.1-24-05-403.

(c) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on appropriate sections of "ATPI course 415: control of gaseous emissions" (incorporated by reference as specified in section 33.1-24-01-05) or other engineering texts acceptable to the department that present basic control device information. The design analysis should address the vent stream characteristics and control device operation parameters as specified in paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.

(d) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.

- (e) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of ninety-five weight percent or greater.
- ee. Except as otherwise provided by section 33.1-24-05-01, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads must provide the following additional information:
- (1) A list of hazardous wastes placed or to be placed on each drip pad.
 - (2) If an exemption is sought to sections 33.1-24-05-47 through 33.1-24-05-58, as provided by section 33.1-24-05-47, detailed plans and an engineering report describing how the requirements of subdivision b of subsection 2 of section 33.1-24-05-47 will be met.
 - (3) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated, and maintained to meet the requirements of section 33.1-24-05-504, including the as-built drawings and specifications. This submission must address the following items as specified in section 33.1-24-05-502:
 - (a) The design characteristics of the drip pad;
 - (b) The liner system;
 - (c) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;
 - (d) Practices designed to maintain drip pads;
 - (e) The associated collection system;
 - (f) Control of run-on to the drip pad;
 - (g) Control of runoff from the drip pad;
 - (h) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
 - (i) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including rinsing, washing with detergents or other appropriate solvents, or steam cleaning and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned;
 - (j) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;

- (k) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and nonpressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;
- (l) Provisions for ensuring that collection and holding units associated with the run-on and runoff control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;
- (m) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals;
- (n) A description of how each drip pad, including appurtenances for control of run-on and runoff, will be inspected in order to meet the requirements of section 33.1-24-05-504. This information should be included in the inspection plan submitted under subdivision e;
- (o) A certification signed by a qualified, professional engineer, stating that the drip pad design meets the requirements of subsections 1 through 6 of section 33.1-24-05-504; and
- (p) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under subsection 1 of section 33.1-24-05-506. For any waste not to be removed from the drip pad upon closure, the owner or operator must submit detailed plans and an engineering report describing how section 33.1-24-05-180 will be complied with. This information should be included in the closure plan and, where applicable, the postclosure plan submitted under subdivision m.
- ff. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to hazardous waste permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR sections 63.1207(i) and 63.1210(d) documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this subdivision do not apply. The requirements of this subdivision do apply, however, if the department determines certain provisions are necessary to ensure compliance with subdivision a of subsection 5 of section 33.1-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33.1-24-05-527 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if the permittee is an area source and elects to comply with the sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and nonmercury metals; or the department determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with subsections 11 and 12 of

section 33.1-24-06-01 and subdivisions b and c of subsection 2 of section 33.1-24-06-05.

(1) Trial burns.

(a) General. Except as provided below, owners and operators that are subject to the standards to control organic emissions provided by section 33.1-24-05-529, standards to control particulate matter provided by section 33.1-24-05-530, standards to control metals emissions provided by section 33.1-24-05-531, or standards to control hydrogen chloride or chlorine gas emissions provided by section 33.1-24-05-532 must conduct a trial burn to demonstrate conformance with those standards and must submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with subsection 4 of section 33.1-24-06-19.

[1] A trial burn to demonstrate conformance with a particular emission standard may be waived under provisions of sections 33.1-24-05-529 through 33.1-24-05-532 and subparagraphs b through e; and

[2] The owner or operator may submit data in lieu of a trial burn, as prescribed in subparagraph f.

(b) Waiver of trial burn for destruction and removal efficiency.

[1] Boilers operated under special operating requirements. When seeking to be permitted under subdivision d of subsection 1 of section 33.1-24-05-529 and section 33.1-24-05-535 that automatically waive the destruction and removal efficiency trial burn, the owner or operator of a boiler must submit documentation that the boiler operates under the special operating requirements provided by section 33.1-24-05-535.

[2] Boilers and industrial furnaces burning low risk waste. When seeking to be permitted under the provisions for low risk waste provided by subdivision e of subsection 1 of section 33.1-24-05-529 and subsection 1 of section 33.1-24-05-534 that waive the destruction and removal efficiency trial burn, the owner or operator must submit:

[a] Documentation that the device is operated in conformance with the requirements of subdivision a of subsection 1 of section 33.1-24-05-534.

[b] Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in appendix V of chapter 33.1-24-02, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained. The analysis must rely on appropriate analytical techniques .

[c] Documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in subitem b using procedures provided by paragraph 2 of subdivision b of subsection 1 of section 33.1-24-05-534.

[d] Results of emissions dispersion modeling for emissions identified in subitem c using modeling procedures prescribed by subsection 8 of section 33.1-24-05-531. The department will review the emission modeling conducted by the applicant to determine conformance with these procedures. The department will either approve the modeling or determine that alternate or supplementary modeling is appropriate.

[e] Documentation that the maximum annual average ground level concentration of each constituent identified in subitem b quantified in conformance with subitem d does not exceed the allowable ambient level established in appendices XIX or XX of chapter 33.1-24-05. The acceptable ambient concentration for emitted constituents for which a specific reference air concentration has not been established in appendix XIX of chapter 33.1-24-05 or risk-specific dose has not been established in appendix XX of chapter 33.1-24-05 is 0.1 micrograms per cubic meter, as noted in the footnote to appendix XIX of chapter 33.1-24-05.

(c) Waiver of trial burn for metals. When seeking to be permitted under the tier I (or adjusted tier I) metals feed rate screening limits provided by subsections 2 and 5 of section 33.1-24-05-531 that control metals emissions without requiring a trial burn, the owner or operator must submit:

[1] Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;

[2] Documentation of the concentration of each metal controlled by subsection 2 or 5 of section 33.1-24-05-531 in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;

[3] Documentation of how the applicant will ensure that the tier I feed rate screening limits provided by subsection 2 or 5 of section 33.1-24-05-531 will not be exceeded during the averaging period provided by that subsection;

[4] Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by subdivisions c through e of subsection 2 of section 33.1-24-05-531;

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- [5] Documentation of compliance with the provisions of subdivision f of subsection 2 of section 33.1-24-05-531, if applicable, for facilities with multiple stacks;
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- [6] Documentation that the facility does not fail the criteria provided by subdivision g of subsection 2 of section 33.1-24-05-531 for eligibility to comply with the screening limits; and
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- [7] Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feedstocks.
- (d) Waiver of trial burn for particulate matter. When seeking to be permitted under the low risk waste provisions of subsection 2 of section 33.1-24-05-534 which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants must submit documentation supporting conformance with item 2 of subparagraph b and subparagraph c.
- (e) Waiver of trial burn for hydrogen chloride and chlorine. When seeking to be permitted under the tier I (or adjusted tier I) feed rate screening limits for total chloride and chlorine provided by subdivision a of subsection 2 and subsection 5 of section 33.1-24-05-532 that control emissions of hydrogen chloride and chlorine gas without requiring a trial burn, the owner or operator must submit:
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- [1] Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feedstocks;
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- [2] Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;
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- [3] Documentation of how the applicant will ensure that the tier I (or adjusted tier I) feed rate screening limits provided by subdivision a of subsection 2 or subsection 5 of section 33.1-24-05-532 will not be exceeded during the averaging period provided by that subsection;
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- [4] Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by subdivision c of subsection 2 of section 33.1-24-05-532;
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- [5] Documentation of compliance with the provisions of subdivision d of subsection 2 of section 33.1-24-05-532, if applicable, for facilities with multiple stacks;
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- [6] Documentation that the facility does not fail the criteria provided by subdivision c of subsection 2 of section 33.1-24-05-532 for eligibility to comply with the screening limits; and

[7] Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

(f) Data in lieu of trial burn. The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with sections 33.1-24-05-529 through 33.1-24-05-532 and subsection 4 of section 33.1-24-06-19 by providing the information required by subsection 4 of section 33.1-24-06-19 from previous compliance testing of the device in conformance with section 33.1-24-05-528, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous wastes under similar conditions. If data from a similar device is used to support a trial burn waiver, the design and operating information required by subsection 4 of section 33.1-24-06-19 must be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information must be provided. The department shall approve a permit application without a trial burn if the department finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (under section 33.1-24-05-527) operating conditions that will ensure conformance with subsection 3 of section 33.1-24-05-527. In addition, the following information shall be submitted:

[1] For a waiver from any trial burn:

[a] A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;

[b] The design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and

[c] Such supplemental information as the department finds necessary to achieve the purposes of this subparagraph.

[2] For a waiver of the destruction and removal efficiency trial burn, the basis for selection of principal organic hazardous constituents used in the other trial or operational burns which demonstrate compliance with the destruction and removal efficiency performance standard in subsection 1 of section 33.1-24-05-529. This analysis should specify the constituents in appendix V of chapter 33.1-24-02, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the principal organic hazardous constituents in the hazardous waste for which burn data are provided.

(2) Alternative hydrocarbon limit for industrial furnaces with organic matter in raw materials. Owners and operators of industrial furnaces requesting an alternative hydrocarbon limit under subsection 6 of section 33.1-24-05-529 shall submit the following information at a minimum:

(a) Documentation that the furnace is designed and operated to minimize hydrocarbon emissions from fuels and raw materials;

(b) Documentation of the proposed baseline flue gas hydrocarbon (and carbon monoxide) concentration, including data on hydrocarbon (and carbon monoxide) levels during tests when the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;

(c) Test burn protocol to confirm the baseline hydrocarbon (and carbon monoxide) level, including information on the type and flow rate of all feed streams, point of introduction of all feed streams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feed streams, and operating conditions that affect combustion of fuels and destruction of hydrocarbon emissions from nonfuel sources;

(d) Trial burn plan to:

[1] Demonstrate that flue gas hydrocarbon (and carbon monoxide) concentrations when burning hazardous waste do not exceed the baseline hydrocarbon (and carbon monoxide) level; and

[2] Identify the types and concentrations of organic compounds listed in appendix V of chapter 33.1-24-02, that are emitted when burning hazardous waste in conformance with procedures prescribed by the department;

(e) Implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline hydrocarbon level and procedures to periodically confirm the baseline hydrocarbon level; and

(f) Such other information as the department finds necessary to achieve the purposes of this paragraph.

(3) Alternative metals implementation approach. When seeking to be permitted under an alternative metals implementation approach under subsection 6 of section 33.1-24-05-531, the owner or operator must submit documentation specifying how the approach ensures compliance with the metals emissions standards of subsection 3 or 4 of section 33.1-24-05-531 and how the approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the department finds necessary to achieve the purposes of this paragraph.

(4) Automatic waste feed cutoff system. Owners and operators shall submit information describing the automatic waste feed cutoff system, including any prealarm systems that may be used.

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- (5) Direct transfer. Owners and operators that use direct transfer operations to feed hazardous waste from transport vehicles (containers, as defined in section 33.1-24-05-536) directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by section 33.1-24-05-536.
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- (6) Residues. Owners and operators that claim that their residues are excluded from regulation under the provisions of section 33.1-24-05-537 must submit information adequate to demonstrate conformance with those provisions.
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- gg. A summary of the preapplication meeting, along with a list of attendees and their addresses, and copies of any written comments or materials submitted at the meeting, as required under subsection 3 of section 33.1-24-07-25.
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- hh. Except as otherwise provided in section 33.1-24-05-01, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 must provide the following additional information:
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- (1) Documentation for each floating roof cover installed on a tank subject to subdivision a or b of subsection 4 of section 33.1-24-05-454 that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in subdivision a of subsection 5 or subdivision a of subsection 6 of section 33.1-24-05-454.
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- (2) Identification of each container area subject to the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 and certification by the owner or operator that the requirements of chapter sections 33.1-24-05-450 through 33.1-24-05-474 are met.
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- (3) Documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of subdivision e of subsection 4 of section 33.1-24-05-454 or paragraph 2 of subdivision a of subsection 5 of section 33.1-24-05-456 that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
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- (4) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of subsection 3 of section 33.1-24-05-455 that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in subdivision a of subsection 3 of section 33.1-24-05-455.
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- (5) Documentation for each closed-vent system and control device installed in accordance with the requirements of section 33.1-24-05-457 that includes

design and performance information as specified in paragraphs 3 and 4 of subdivision cc.

(6) An emission monitoring plan for both method 21 in 40 CFR part 60, appendix A and control device monitoring methods. This plan shall include the following information: monitoring point or points, monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.

(7) When an owner or operator of a facility subject to sections 33.1-24-05-450 through 33.1-24-05-474 cannot comply with the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 by the date of permit issuance, the schedule of implementation required under 40 CFR 265.1082 as incorporated by reference at subsection 5 of section 33.1-24-06-16 must be provided.

3. Additional information requirements. The following additional information regarding protection of ground water is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in subsection 2 of section 33.1-24-05-47.

a. A summary of the ground water monitoring data obtained during the interim status period under subsection 5 of section 33.1-24-06-16, where applicable.

b. Identification of the uppermost aquifer and aquifers hydrologically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification, for example, the information obtained from hydrogeologic investigations of the facility area.

c. On the topographic map required under subdivision q of subsection 2, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under section 33.1-24-05-52, the proposed location of ground water monitoring wells as required under section 33.1-24-05-54, and to the extent possible, the information required in subdivision b.

d. A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted:

(1) Delineates the extent of the plume on the topographic map required under subdivision q of subsection 2; and

(2) Identifies the concentration of each appendix XII, of chapter 33.1-24-05, constituent throughout the plume or identifies the maximum concentrations of each appendix XII constituent in the plume.

e. Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of section 33.1-24-05-54.

f. If the presence of hazardous constituents has not been detected in the ground water at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analysis to establish a detection monitoring program which meets the requirements of section 33.1-24-05-55. This submission must address the following items specified under section 33.1-24-05-55:

- (1) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground water;
 - (2) A proposed ground water monitoring system;
 - (3) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and
 - (4) A description of proposed sampling, analysis, and statistical comparison procedures to be analyzed in evaluating ground water monitoring data.
- g. If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of the permit application, the owner or operator must submit sufficient information, supporting data, and analysis to establish a compliance monitoring program which meets the requirements of section 33.1-24-05-56. Except as provided in subdivision e of subsection 8 of section 33.1-24-05-55, the owner or operator must also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of section 33.1-24-05-57 unless the owner or operator obtains a written authorization in advance from the department to submit a proposed permit schedule for submittal of such a plan. To demonstrate compliance with section 33.1-24-05-56, the owner or operator must address the following items:
- (1) A description of the wastes previously handled at the facility;
 - (2) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
 - (3) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with sections 33.1-24-05-54 and 33.1-24-05-56;
 - (4) Proposed concentration limits for each hazardous constituent, based on the criteria set forth in subsection 1 of section 33.1-24-05-51, including a justification for establishing any alternate concentration limit;
 - (5) Detailed plans and an engineering report describing the proposed ground water monitoring system, in accordance with the requirements of section 33.1-24-05-54; and
 - (6) A description of proposed sampling, analysis, and statistical comparison procedures to be utilized in evaluating ground water monitoring data.
- h. If hazardous constituents have been measured in the ground water which exceed the concentration limits established under section 33.1-24-05-51, table 1, or if ground water monitoring conducted at the time of permit application under sections 33.1-24-05-47 through 33.1-24-05-51 at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over the background concentrations, the owner or operator must submit sufficient information, supporting data, and analysis to establish a corrective action program which meets the requirements of section 33.1-24-05-57. However, an owner or operator is not required to submit information to establish a corrective action program if the owner or operator demonstrates to the department that alternate

concentration limits will protect human health and the environment after considering the criteria listed in subsection 2 of section 33.1-24-05-51. An owner or operator who is not required to establish a corrective action program for this reason must instead submit sufficient information to establish a compliance monitoring program which meets the requirements of section 33.1-24-05-56 and subdivision f. To demonstrate compliance with section 33.1-24-05-57, the owner or operator must address, at a minimum, the following items:

- (1) A characterization of the contaminated ground water, including concentrations of hazardous constituents;
- (2) The concentration limit for each hazardous constituent found in the ground water as set forth in section 33.1-24-05-51;
- (3) Detailed plans and an engineering report describing the corrective action to be taken; and
- (4) A description of how the ground water monitoring program will demonstrate the adequacy of the corrective action.
- (5) The permit may contain a schedule for submittal of the information required in paragraphs 3 and 4 provided the owner or operator obtains written authorization from the department prior to submittal of the complete permit application.

4. Information requirements for solid waste management units.

a. The following information is required for each solid waste management unit at a facility seeking a permit:

- (1) The location of a unit on the topographic map required under subdivision g of subsection 2.
- (2) Designation of type of unit.
- (3) General dimensions and structural description (supply any available drawings).
- (4) When the unit was operated.
- (5) Specification of all wastes that have been managed at the unit to the extent available.

b. The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.

c. The owner or operator must conduct and provide the results of sampling and analysis of ground water, land surface, and subsurface strata, surface water, or air, which may include the installation of wells, where the department ascertains it is necessary to complete a hazardous waste facility assessment that will determine if a more complete investigation is necessary.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-18. Permits by rule.

Notwithstanding any other provision of this chapter or chapter 33.1-24-07, the following are deemed to have a hazardous waste permit if the conditions listed are met:

1. **Injection wells.** The owner or operator of an injection well disposing of hazardous waste, if the owner or operator:

a. Has a permit for underground injection issued under 40 CFR part 144 or 145;

b. Complies with the conditions of that permit and the requirements of section 33.1-25-01-18 (requirements for wells managing hazardous waste) of article 33.1-25 (underground injection control); and

c. For underground injection control permits issued after November 8, 1984:

(1) Complies with section 33.1-24-05-58; and

(2) Where the underground injection control well is the only unit at a facility which requires a hazardous waste permit, complies with subsection 4 of section 33.1-24-06-17.

2. **Publicly owned treatment works.** The owner or operator of a publicly owned treatment works which accepts for treatment hazardous waste, if the owner or operator:

a. Has a North Dakota pollutant discharge elimination system permit;

b. Complies with the conditions of that permit; and

c. Complies with the following:

(1) Section 33.1-24-05-02, identification number.

(2) Section 33.1-24-05-38, use of manifest system.

(3) Section 33.1-24-05-39, manifest discrepancies.

(4) Subsection 1 and subdivision a of subsection 2 of section 33.1-24-05-40, operating record.

(5) Section 33.1-24-05-42, biennial report.

(6) Section 33.1-24-05-43, unmanifested waste report.

(7) Section 33.1-24-05-58, corrective action for solid waste management units.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-19. Special forms of permits.

1. **Emergency permits.** Notwithstanding any other provisions of this chapter or chapter 33.1-24-07, if the department finds an imminent and substantial endangerment to human health or the environment, the department may issue a temporary emergency permit to a nonpermitted facility to allow treatment, storage, or disposal of hazardous waste or a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit. This emergency permit:
 - a. May be oral or written. If oral, it shall be followed in five days by a written emergency permit;
 - b. May not exceed ninety days in duration;
 - c. Must clearly specify the hazardous wastes to be received and the manner and location of their treatment, storage, or disposal;
 - d. May be terminated by the department at any time without process if the department determines that termination is appropriate to protect human health and the environment;
 - e. Must be accompanied by a public notice published under subsection 2 of section 33.1-24-07-06, including:
 - (1) Name and address of the office granting the emergency authorization;
 - (2) Name and location of the permitted hazardous waste management facility;
 - (3) A brief description of the wastes involved;
 - (4) A brief description of the action authorized and reasons for authorizing it; and
 - (5) Duration of the emergency permit; and
 - f. Must incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of this chapter and chapter 33.1-24-05.
2. **Hazardous waste incinerator permits.** When an owner or operator of a hazardous waste incineration unit becomes subject to hazardous waste permit requirements after October 12, 2005, or when an owner or operator of an existing hazardous waste incineration unit demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR sections 63.1207(j) and 63.1210(d) documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this subsection do not apply, except those provisions the department determines are necessary to ensure compliance with subsections 1 and 3 of section 33.1-24-05-149 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events. Nevertheless, the department may apply the provisions of this subsection, on a case-by-case basis, for purposes of information collection in accordance with subsections 11 and 12 of section 33.1-24-06-01 and subdivisions b and c of subsection 2 of section 33.1-24-06-05.

a. For the purposes of determining operational readiness following completion of physical construction, the department shall establish permit conditions, including, but not limited to, allowable waste feeds and operating conditions in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness sufficient to conduct a trial burn, not to exceed seven hundred twenty hours operating time for treatment of hazardous waste. The department may extend the duration of this operational period once for up to seven hundred twenty additional hours at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to section 33.1-24-06-14.

(1) Applicants shall submit a statement with the permit application which suggests the conditions necessary to operate in compliance with the performance standards of section 33.1-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33.1-24-05-149.

(2) The department will review this statement and any other relevant information submitted with the permit application and specify requirements for this period sufficient to meet the performance standards of section 33.1-24-05-147 based on the department's engineering judgment.

b. For the purposes of determining feasibility of compliance with the performance standards of section 33.1-24-05-147 and of determining adequate operating conditions under section 33.1-24-05-149, the department shall establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn.

(1) Applicants must propose a trial burn plan prepared under paragraph 2 with the permit application.

(2) The trial burn plan must include the following information:

(a) An analysis of each waste or mixture of wastes to be burned which includes:

[1] Heat value of the waste in the form and composition in which it will be burned.

[2] Viscosity (if applicable), or description of physical form of the waste.

[3] An identification of any hazardous organic constituents listed in chapter 33.1-24-02, appendix V, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in chapter 33.1-24-02, appendix V, which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on appropriate analytical techniques .

[4] An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by appropriate analytical methods .

(b) A detailed engineering description of the incinerator for which the permit is sought, including:

[1] Manufacturer's name and model number of incinerator (if available).

[2] Type of incinerator.

[3] Linear dimensions of the incinerator unit, including cross-sectional area of combustion chamber.

[4] Description of the auxiliary fuel system (type/feed).

[5] Capacity of prime mover.

[6] Description of automatic waste feed cutoff system or systems.

[7] Stack gas monitoring and pollution control equipment.

[8] Nozzle and burner design.

[9] Construction materials.

[10] Location and description of temperature, pressure, and flow indicating and control devices.

(c) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(d) A detailed test schedule for each waste for which the trial burn is planned, including dates, duration, quantity of waste to be burned, and other factors relevant to the department's decision under paragraph 5.

(e) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.

(f) A description of, and planned operating conditions for, any emission control equipment which will be used.

(g) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.

(h) Such other information as the department reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in paragraph 5.

(3) In reviewing the trial burn plan, the department shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this subsection.

(4) Based on the waste analysis data in the trial burn plan, the department will specify as trial principal organic hazardous constituents those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial principal organic hazardous constituents will be specified by the department based on the department's estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and, for wastes listed in sections 33.1-24-02-15 through 33.1-24-02-19, the hazardous waste organic constituent or constituents identified in appendix IV of chapter 33.1-24-02 as the basis for listing.

(5) The department shall approve a trial burn plan if the department finds that:

(a) The trial burn is likely to determine whether the incinerator performance standard required by section 33.1-24-05-147 can be met;

(b) The trial burn itself will not present an imminent hazard to human health or the environment;

(c) The trial burn will help the department determine operating requirements to be specified under section 33.1-24-05-149; and

(d) The information sought in subparagraphs a and c cannot reasonably be developed through other means.

(6) The department must send a notice to all persons on the facility mailing list as set forth in paragraph 4 of subdivision a of subsection 3 of section 33.1-24-07-06 and to the appropriate units of state and local government as set forth in subdivision b of subsection 3 of section 33.1-24-07-06 announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the department has issued such notice.

(a) This notice must be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the department.

(b) This notice must contain:

[1] The name and telephone number of the applicant's contact person;

[2] The name and telephone number of the department's contact office;

[3] The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and

[4] An expected time period for commencement and completion of the trial burn.

(7) During each approved trial burn (or as soon after the burn as practicable), the applicant must make the following determinations:

- (a) A quantitative analysis of the trial principal organic hazardous constituents in the waste feed to the incinerator.
- (b) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial principal organic hazardous constituents, oxygen, and hydrogen chloride.
- (c) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial principal organic hazardous constituents.
- (d) A computation of destruction and removal efficiency, in accordance with the destruction and removal efficiency formula specified in subsection 1 of section 33.1-24-05-147.
- (e) If the hydrogen chloride emission rate exceeds one and eight-tenths kilograms of hydrogen chloride per hour [4 pounds per hour], a computation of the hydrogen chloride removal efficiency in accordance with subsection 2 of section 33.1-24-05-147.
- (f) A computation of particulate emissions, in accordance with subsection 3 of section 33.1-24-05-147.
- (g) An identification of sources of fugitive emissions and their means of control.
- (h) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.
- (i) A continuous measurement of carbon monoxides in the exhaust gas.
- (j) Such other information as the department may specify as necessary to ensure that the trial burn will determine compliance with the performance standard in section 33.1-24-05-147 and to establish the operating conditions required by section 33.1-24-05-149 as necessary to meet that performance standard.
- (8) The applicant shall submit to the department a certification that the trial burn has been carried out in accordance with the approved trial burn plan and shall submit the results of all the determinations required in paragraph 6. This submission must be made within ninety days of the completion of the trial burn, or later if approved by the department.
- (9) All data collected during any trial burn must be submitted to the department following the completion of the trial burn.
- (10) All submissions required by this subdivision must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under section 33.1-24-06-03.
- (11) Based on the results of the trial burn, the department shall set the operating requirements in the final permit according to section 33.1-24-05-149. The permit modification shall proceed according to section 33.1-24-06-14.

c. For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the department may establish permit conditions including, but not limited to, allowable waste feeds and operating conditions sufficient to meet the requirements of section 33.1-24-05-149 in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation, and submission of the trial burn results by the applicant, and modification of the facility permit by the department.

(1) Applicants shall submit a statement with the permit application which identifies the conditions necessary to operate in compliance with the performance standards of section 33.1-24-05-147 during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters identified in section 33.1-24-05-149.

(2) The department will review this statement and any other relevant information submitted with the permit application and specify those requirements for this period most likely to meet the performance standards of section 33.1-24-05-147 based on the department's engineering judgment.

d. For the purpose of determining feasibility of compliance with the performance standards of section 33.1-24-05-147 and of determining adequate operating conditions under section 33.1-24-05-149, the applicant for a permit for an existing hazardous waste incinerator must prepare and submit a trial burn plan and perform a trial burn in accordance with paragraph 2 of subdivision w of subsection 2 of section 33.1-24-06-17 and paragraphs 2 through 5 and 7 through 10 of subdivision b or, instead, submit other information as specified in paragraph 3 of subdivision w of subsection 2 of section 33.1-24-06-17. The department must announce the department's intention to approve the trial burn plan in accordance with the timing and distribution requirements of paragraph 6 of subdivision b. The contents of the notice must also include a schedule of the activities that are required prior to permit issuance. Applicants submitting information under paragraph 1 of subdivision w of subsection 2 of section 33.1-24-06-17 are exempt from compliance with sections 33.1-24-05-147 and 33.1-24-05-149 and, therefore, are exempt from the requirement to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submission of a permit application must complete the trial burn and submit the results specified in paragraph 6 of subdivision b, with part B of the permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant must contact the department to establish a later date for submission of the part B application or the trial burn results. Trial burn results must be submitted prior to issuance of the permit. When the applicant submits a trial burn plan with part B of the permit application, the department will specify a time period prior to permit issuance in which the trial burn must be conducted and the results submitted.

3. Permits for land treatment demonstrations using field tests or laboratory analyses.

a. For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of section 33.1-24-05-162, the department may issue a treatment demonstration permit. The permit must contain only those requirements

necessary to meet the standards in subsection 3 of section 33.1-24-05-162. The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses or as a two-phase facility permit covering field tests or laboratory analyses and design construction, operation, and maintenance of the land treatment unit.

(1) The department may issue a two-phase facility permit if the department finds that based on information submitted in the permit application substantial, although incomplete or inconclusive, information already exists on which to base the issuance of a facility permit.

(2) If the department finds that not enough information exists upon which the department can establish permit conditions to attempt to provide for compliance with all the requirements of the land treatment requirements in sections 33.1-24-05-160 through 33.1-24-05-175, the department shall issue a treatment demonstration permit covering only the field test or laboratory analyses.

b. If the department finds that a phased permit may be issued, the department will establish as requirements in the first phase of the facility permit conditions for conducting a field test or laboratory analyses. These permit conditions will contain design and operating parameters (including the duration of the tests or analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, postdemonstration cleanup activities, and any other conditions which the department finds may be necessary under subsection 3 of section 33.1-24-05-162. The department will include conditions in the second phase of the facility permit to attempt to meet all the requirements in sections 33.1-24-05-160 through 33.1-24-05-175 pertaining to unit design, construction, operation, and maintenance. The department will establish these conditions in the second phase of the permit, based upon the substantial but incomplete or inconclusive information contained in the permit application.

(1) The first phase of the permit will be effective as provided in subsection 2 of section 33.1-24-07-11.

(2) The second phase of the permit will be effective as provided in subdivision d.

c. When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, the owner or operator shall submit to the department a certification signed by a person authorized to sign a permit application or report under section 33.1-24-06-03 that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting such tests or analyses. The owner or operator shall also submit all data collected during the field tests or laboratory analyses within ninety days of completion of those tests or analyses, unless the department approves a later date.

d. If the department determines that the results of the field tests or laboratory analyses meet the requirements of section 33.1-24-05-162, the department will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with sections 33.1-24-05-160 through 33.1-24-05-175, based upon the results of the field tests or laboratory analyses.

(1) This permit modification may proceed under section 33.1-24-06-14, or otherwise proceed as a modification under subdivision b of subsection 1 of section 33.1-24-06-12. If such modifications are necessary, the second phase of the permit will become effective only after those modifications have been made.

(2) If no modifications of the second phase of the permit are necessary, the department will give notice of the department's final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in subsection 2 of section 33.1-24-07-11.

4. Permits for boilers and industrial furnaces burning hazardous waste. When an owner or operator of a cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace becomes subject to hazardous waste permit requirements after October 12, 2005, or when an owner or operator of an existing cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace demonstrates compliance with the air emission standards and limitations in 40 CFR part 63, subpart EEE (for example, by conducting a comprehensive performance test and submitting a notification of compliance under 40 CFR sections 63.1207(i) and 63.1210(d) documenting compliance with all applicable requirements of 40 CFR part 63, subpart EEE), the requirements of this subsection do not apply. The requirements of this subsection do apply, however, if the department determines certain provisions are necessary to ensure compliance with subdivision a of subsection 5 of section 33.1-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33.1-24-05-527 if the permittee elects to comply with paragraph 1 of subdivision a of subsection 1 of section 33.1-24-06-100 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events; or if the permittee is an area source and elects to comply with the sections 33.1-24-05-530, 33.1-24-05-531, and 33.1-24-05-532 standards and associated requirements for particulate matter, hydrogen chloride and chlorine gas, and nonmercury metals; or the department determines certain provisions apply, on a case-by-case basis, for purposes of information collection in accordance with subsections 11 and 12 of section 33.1-24-06-01 and subdivisions b and c of subsection 2 of section 33.1-24-06-05.

a. General. Owners and operators of new boilers and industrial furnaces (those not operating under the interim status standards of section 33.1-24-05-528) are subject to subdivisions b through f. Boilers and industrial furnaces operating under the interim status standards of section 33.1-24-05-528 are subject to subdivision g.

b. Permit operating periods for new boilers and industrial furnaces. A permit for a new boiler or industrial furnace shall specify appropriate conditions for the following operating periods:

(1) Pretrial burn period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed seven hundred twenty hours operating time when burning hazardous waste, the department must establish in the pretrial burn period of the permit conditions, including, but not limited to, allowable hazardous waste feed rates and operating

conditions. The department may extend the duration of this operational period once, for up to seven hundred twenty additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to section 33.1-24-06-14.

(a) Applicants must submit a statement, with part B of the permit application, that suggests the conditions necessary to operate in compliance with the standards of sections 33.1-24-05-529 through 33.1-24-05-532 during this period. This statement should include, at a minimum, restrictions on the applicable operating requirements identified in subsection 5 of section 33.1-24-05-527.

(b) The department will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532 based on the department's engineering judgment.

(2) Trial burn period. For the duration of the trial burn, the department must establish conditions in the permit for the purposes of determining feasibility of compliance with the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532 and determining adequate operating conditions under subsection 5 of section 33.1-24-05-527. Applicants must propose a trial burn plan, prepared under subdivision c, to be submitted with part B of the permit application.

(3) Posttrial burn period.

(a) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the department to reflect the trial burn results, the department will establish the operating requirements most likely to ensure compliance with the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532 based on the department's engineering judgment.

(b) Applicants must submit a statement, with part B of the application, that identifies the conditions necessary to operate during this period in compliance with the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532. This statement should include, at a minimum, restrictions on the operating requirements provided by subsection 5 of section 33.1-24-05-527.

(c) The department will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532 based on the department's engineering judgment.

(4) Final permit period. For the final period of operation, the department will develop operating requirements in conformance with subsection 5 of section

33.1-24-05-527 that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532. Based on the trial burn results, the department shall make any necessary modifications to the operating requirements to ensure compliance with the performance standards. The permit modification shall proceed according to section 33.1-24-06-14.

c. Requirements for trial burn plans. The trial burn plan must include the following information. The department, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this subdivision:

(1) An analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:

(a) Heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total chlorine/chloride, and ash; and

(b) Viscosity or description of the physical form of the feed stream;

(2) An analysis of each hazardous waste, as fired, including:

(a) An identification of any hazardous organic constituents listed in appendix V of chapter 33.1-24-02, that are present in the feed stream, except that the applicant need not analyze for constituents listed in appendix V of chapter 33.1-24-02 that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis must be identified and the basis for this exclusion explained. The waste analysis must be conducted in accordance with appropriate analytical techniques.

(b) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by appropriate analytical methods.

(c) A description of blending procedures, if applicable, prior to firing the hazardous waste, including a detailed analysis of the hazardous waste prior to blending, an analysis of the material with which the hazardous waste is blended, and blending ratios.

(3) A detailed engineering description of the boiler or industrial furnace, including:

(a) Manufacturer's name and model number of the boiler or industrial furnace;

(b) Type of boiler or industrial furnace;

(c) Maximum design capacity in appropriate units;

(d) Description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks;

(e) Capacity of hazardous waste feed system;

(f) Description of automatic hazardous waste feed cutoff systems;

(g) Description of any air pollution control system; and

(h) Description of stack gas monitoring and any pollution control monitoring systems.

(4) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(5) A detailed test schedule for each hazardous waste for which the trial burn is planned, including dates, duration, quantity of hazardous waste to be burned, and other factors relevant to the department's decision under paragraph 2 of subdivision b.

(6) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate, and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that may affect the ability of the boiler or industrial furnace to meet the performance standards in sections 33.1-24-05-529 through 33.1-24-05-532.

(7) A description of, and planned operating conditions for, any emission control equipment that will be used.

(8) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction.

(9) Such other information as the department reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this subdivision and the criteria in paragraph 2 of subdivision b.

d. Trial burn procedures.

(1) A trial burn must be conducted to demonstrate conformance with the standards of sections 33.1-24-05-529 through 33.1-24-05-532 under an approved trial burn plan.

(2) The department shall approve a trial burn plan if the department finds that:

(a) The trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532;

(b) The trial burn itself will not present an imminent hazard to human health and the environment;

(c) The trial burn will help the department to determine operating requirements to be specified under subsection 5 of section 33.1-24-05-527; and

- (d) The information sought in the trial burn cannot reasonably be developed through other means.
- (3) The department must send a notice to all persons on the facility mailing list as set forth in subdivision a of subsection 3 of section 33.1-24-07-06 and to the appropriate units of local government as set forth in subdivision b of subsection 3 of section 33.1-24-07-06 announcing the scheduled commencement and completion dates for the trial burn. The applicant may not commence the trial burn until after the department has issued such notice. This notice must be mailed within a reasonable time period before the trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the department. This notice must contain:
- (a) The name and telephone number of the applicant's contact person;
- (b) The name and telephone number of the department contact;
- (c) The location where the approved trial burn plan and any supporting documents can be reviewed and copied; and
- (d) An expected time period for commencement and completion of the trial burn.
- (4) The applicant must submit to the department a certification that the trial burn has been carried out in accordance with the approved trial burn plan and must submit the results of all the determinations required in subdivision c. This submission shall be made within ninety days of completion of the trial burn, or later if approved by the department.
- (5) All data collected during any trial burn must be submitted to the department following completion of the trial burn.
- (6) All submissions required by this subdivision must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under section 33.1-24-06-03.
- e. Special procedures for destruction and removal efficiency trial burns. When a destruction and removal efficiency trial burn is required under subsection 1 of section 33.1-24-05-529, the department will specify (based on the hazardous waste analysis data and other information in the trial burn plan) as trial principal organic hazardous constituents those compounds for which destruction and removal efficiencies must be calculated during the trial burn. These trial principal organic hazardous constituents will be specified by the department based on information, including the department's estimate of the difficulty of destroying the constituents identified in the hazardous waste analysis, their concentrations or mass in the hazardous waste feed, and, for hazardous waste containing or derived from wastes listed in sections 33.1-24-02-15 through 33.1-24-05-19, the hazardous waste organic constituent or constituents identified in appendix IV of chapter 33.1-24-02 as the basis for listing.

- f. Determinations based on trial burn. During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations:
- (1) A quantitative analysis of the levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and chlorine/chloride, in the feed streams (hazardous waste, other fuels, and industrial furnace feedstocks);
 - (2) When a destruction and removal efficiency trial burn is required under subsection 1 of section 33.1-24-05-529:
 - (a) A quantitative analysis of the trial principal organic hazardous constituents in the hazardous waste feed;
 - (b) A quantitative analysis of the stack gas for the concentration and mass emissions of the trial principal organic hazardous constituents; and
 - (c) A computation of destruction and removal efficiency, in accordance with the destruction and removal efficiency formula specified in subsection 1 of section 33.1-24-05-529;
 - (3) When a trial burn for chlorinated dioxins and furans is required under subsection 5 of section 33.1-24-05-529, a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2,3,7,8-chlorinated tetra-octa congeners of chlorinated dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard;
 - (4) When a trial burn for particulate matter, metals, hydrogen chloride or chlorine is required under section 33.1-24-05-530, subsection 3 or 4 of section 33.1-24-05-531, or subdivision b of subsection 2 or subsection 3 of section 33.1-24-05-532, a quantitative analysis of the stack gas for the concentrations and mass emissions of particulate matter, metals, or hydrogen chloride and chlorine, and computations showing conformance with the applicable emission performance standards;
 - (5) When a trial burn for destruction and removal efficiency, metals, or hydrogen chloride or chlorine is required under subsection 1 of section 33.1-24-05-529, subsection 3 or 4 of section 33.1-24-05-531, or subdivision b of subsection 2 or subsection 3 of section 33.1-24-05-532, a quantitative analysis of the scrubber water (if any), ash residues, other residues, and products for the purpose of estimating the fate of the trial principal organic hazardous constituents, metals, and chlorine/chloride;
 - (6) An identification of sources of fugitive emissions and their means of control;
 - (7) A continuous measurement of carbon monoxide, oxygen, and where required, hydrocarbons, in the stack gas; and
 - (8) Such other information as the department may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in sections 33.1-24-05-529 through 33.1-24-05-532 and to establish the

operating conditions required by subsection 5 of section 33.1-24-05-527 as necessary to meet those performance standards.

g. Interim status boilers and industrial furnaces. For the purpose of determining feasibility of compliance with the performance standards of sections 33.1-24-05-529 through 33.1-24-05-532 and of determining adequate operating conditions under section 33.1-24-05-528, applicants owning or operating existing boilers or industrial furnaces operated under the interim status standards of section 33.1-24-05-528 must either prepare and submit a trial burn plan and perform a trial burn in accordance with the requirements of this subsection or submit other information as specified in subparagraph f of paragraph 1 of subdivision ff of subsection 2 of section 33.1-24-06-17. The department must announce its intention to approve of the trial burn plan in accordance with the timing and distribution requirements of paragraph 3 of subdivision d. The contents of the notice must include: the name and telephone number of a contact person at the facility; the name and telephone number of the department contact; the location where the trial burn plan and any supporting documents can be reviewed and copied; and a schedule of the activities that are required prior to permit issuance, including the anticipated time schedule for department approval of the plan and the time periods during which the trial burn would be conducted. Applicants who submit a trial burn plan and receive approval before submission of the part B permit application must complete the trial burn and submit the results specified in subdivision f with the part B permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant must contact the department to establish a later date for submission of the part B application or the trial burn results. If the applicant submits a trial burn plan with part B of the permit application, the trial burn must be conducted and the results submitted within a time period prior to permit issuance to be specified by the department.

5. **Remedial action plans.** Remedial action plans (RAPs) are special forms of permits that are regulated under sections 33.1-24-06-30 through 33.1-24-06-35.

6. **Hazardous waste standardized permits.** Standardized permits are special forms of permits for treatment, storage, or disposal owners or operators that:

a. Generate hazardous waste and then nonthermally treat or store the hazardous waste onsite in tanks, containers, or containment buildings; or

b. Receive hazardous waste generated offsite by a generator under the same ownership as the receiving facility, and then store or nonthermally treat the hazardous waste in containers, tanks, or containment buildings. Standardized permit facility owners or operators are regulated under sections 33.1-24-06-45 through 33.1-24-06-85, 33.1-24-07-40 through 33.1-24-07-54, and 33.1-24-05-950 through 33.1-24-05-1149.

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General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-20. Research, development, and demonstration permits.

1. The department may issue a research, development, and demonstration permit for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards for such experimental activity have not been promulgated under sections 33.1-24-05-01 through 33.1-24-05-249, 33.1-24-05-300 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-929. Any such permit must include such terms and conditions as will assure protection of human health and the environment. Such permits:
 - a. Must provide for the construction of such facilities as necessary, and for operation of a facility for not longer than one year unless renewed as provided in subsection 4;
 - b. Must provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the department deems necessary for purposes of determining the efficacy and performance capabilities of the technology or process and the effects of such technology on human health and the environment; and
 - c. Must include such requirements as the department deems necessary to protect human health and the environment (including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure, and remedial action), and such requirements as the department deems necessary regarding testing and providing of information to the department with respect to the operation of the facility.
2. For the purpose of expediting review and issuance of permits under this section, the department may, consistent with the protection of human health and the environment, modify or waive permit application and permit issuance requirements in chapters 33.1-24-06 and 33.1-24-07 except that there may be no modification or waiver of regulations regarding financial responsibility (including insurance) or of procedures regarding public participation.
3. The department may order an immediate termination of all operations at the facility at any time the department determines that termination is necessary to protect human health and the environment.
4. Any permit issued under this section may be renewed not more than three times. Each such renewal is for a period of not more than one year.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-21. Fees.

The department may assess and collect reasonable fees for activities associated with permit applications, and for the issuance, modification, revocation and reissuance, termination, renewal, and transfer of permits.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-09; S.L. 2017, ch. 199, § 19

33.1-24-06-22. [Reserved]

33.1-24-06-23. [Reserved]

33.1-24-06-24. [Reserved]

33.1-24-06-25. [Reserved]

33.1-24-06-26. [Reserved]

33.1-24-06-27. [Reserved]

33.1-24-06-28. [Reserved]

33.1-24-06-29. [Reserved]

33.1-24-06-30. Remedial action plan - General information.

1. General information.

a. A remedial action plan is a special form of hazardous waste permit that an owner or operator may obtain, instead of a permit issued under sections 33.1-24-06-01 through 33.1-24-06-15, 33.1-24-06-17 through 33.1-24-06-18, subsections 1, 2, 3 and 4 of section 33.1-24-06-19 and section 33.1-24-06-20, to authorize the owner or operator to treat, store, or dispose of hazardous remediation waste (as defined in section 33.1-24-01-04) at a remediation waste management site. A remedial action plan may only be issued for the area of contamination where the remediation wastes to be managed under the remedial action plan originated, or areas in close proximity to the contaminated area, except as allowed in limited circumstances under subsection 1 of section 33.1-24-06-35.

b. The requirements in sections 33.1-24-06-01 through 33.1-24-06-15, 33.1-24-06-17, 33.1-24-06-18, subsections 1 through 4 of section 33.1-24-01-19 and section 33.1-24-06-20 do not apply to remedial action plans unless those requirements for traditional hazardous waste permits are specifically required under sections 33.1-24-06-30 through 33.1-24-06-35.

c. Notwithstanding any other provision of chapter 33.1-24-06 or 33.1-24-07, any document that meets the requirements in this section constitutes a hazardous waste permit under section 23.1-04-08 of the North Dakota Century Code.

d. A remedial action plan may be:

(1) A stand-alone document that includes only the information and conditions required by sections 33.1-24-06-30 through 33.1-24-06-35; or

(2) Part or parts of another document that includes information or conditions, or both, for other activities at the remediation waste management site, in addition to the information and conditions required by sections 33.1-24-06-30 through 33.1-24-06-35.

e. If the owner or operator is treating, storing, or disposing of hazardous remediation wastes as part of a cleanup compelled by federal or state cleanup authorities, the remedial action plan does not affect the owner's or operator's obligations under those authorities in any way.

f. If the owner or operator receives a remedial action plan at a facility operating under interim status, the remedial action plan does not terminate interim status.

2. A remedial action plan is necessary when:

a. Whenever the owner or operator treats, stores, or disposes of hazardous remediation wastes in a manner that requires a hazardous waste permit, the owner or operator must either obtain:

(1) A hazardous waste permit according to sections 33.1-24-06-01 through 33.1-24-06-15, 33.1-24-06-17, 33.1-24-06-18, subsections 1 through 4 of section 33.1-24-06-19 and section 33.1-24-06-20; or

(2) A remedial action plan according to sections 33.1-24-06-30 through 33.1-24-06-35.

b. Treatment units that use combustion of hazardous remediation wastes at a remediation waste management site are not eligible for remedial action plans under sections 33.1-24-06-30 through 33.1-24-06-35.

c. The owner or operator may obtain a remedial action plan for managing hazardous remediation waste at an already permitted hazardous waste facility. The owner or operator must have these remedial action plans approved as a modification to an existing permit according to the requirements of section 33.1-24-06-12 or 33.1-24-06-14 instead of the requirements in sections 33.1-24-06-30 through 33.1-24-06-35. When the owner or operator submits an application for such a modification, however, the information requirements in paragraph 1 of subdivision a of subsection 1, paragraph 4 of subdivision a of subsection 2, and paragraph 4 of subdivision a of subsection 3 of section 33.1-24-06-14 do not apply; instead, the owner or operator must submit the information required under subsection 4 of section 33.1-24-06-31. When the permit is modified, the remedial action plan becomes part of the hazardous waste permit. Therefore, when a permit (including the remedial action plan portion) is modified, revoked and reissued, terminated or when it expires, it will be modified according to the applicable requirements in sections 33.1-24-06-11, 33.1-24-06-12 and 33.1-24-06-14, revoked and reissued according to the applicable requirements in sections 33.1-24-06-12 and 33.1-24-06-13, terminated according to the applicable requirements in section 33.1-24-06-13, and expire according to the applicable requirements in sections 33.1-24-06-02 and 33.1-24-06-06.

3. Rights and obligations under a remedial action plan. The provisions of section 33.1-24-06-10 apply to remedial action plans. (Note: The provisions of subsection 1 of section 33.1-24-06-10 provide the owner or operator assurance that, as long as the owner or operator complies with the remedial action plan, the department will consider the owner or operator in compliance with this article and will not take enforcement actions against the owner or operator. However, the owner or operator should be aware of four exceptions to this provision that are listed in section 33.1-24-06-10.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-31. Remedial action plan application process.

1. To apply for a remedial action plan, the owner or operator must complete an application, sign it, and submit it to the department according to the requirements in sections 33.1-24-06-30 through 33.1-24-06-35.
2. Who applies. When a facility or remediation waste management site is owned by one person, but the treatment, storage, or disposal activities are operated by another person, it is the operator's duty to obtain a remedial action plan, except that the owner must also sign the remedial action plan application.
3. Signatory requirements. Both the owner and the operator must sign the remedial action plan application and any required reports according to subsections 1, 2, and 3 of section 33.1-24-06-03. In the application, both the owner and the operator must also make the certification required under subdivision a of subsection 4 of section 33.1-24-06-03. However, the owner may choose the alternative certification under subdivision b of subsection 4 of section 33.1-24-06-03 if the operator certifies under subdivision a of subsection 4 of section 33.1-24-06-03.
4. Information to be included in the application. The owner or operator must include the following information in the application for a remedial action plan:
 - a. The name, address, and identification number of the remediation waste management site;
 - b. The name, address, and telephone number of the owner and operator;
 - c. The latitude and longitude of the site;
 - d. The United States geological survey or county map showing the location of the remediation waste management site;
 - e. A scaled drawing of the remediation waste management site showing:
 - (1) The remediation waste management site boundaries;
 - (2) Any significant physical structures; and
 - (3) The boundary of all areas onsite where remediation waste is to be treated, stored, or disposed;
 - f. A specification of the hazardous remediation waste to be treated, stored, or disposed of at the facility or remediation waste management site. This must include information on:
 - (1) Constituent concentrations and other properties of the hazardous remediation wastes that may affect how such materials should be treated or otherwise managed;

- (2) An estimate of the quantity of these wastes; and
- (3) A description of the processes the owner or operator will use to treat, store, or dispose of this waste, including technologies, handling systems, and design and operating parameters the owner or operator will use to treat hazardous remediation wastes before disposing of them according to the land disposal restrictions standards of sections 33.1-24-05-250 through 33.1-24-05-299, as applicable;
- g. Enough information to demonstrate that operations that follow the provisions in the remedial action plan application will ensure compliance with applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929;
- h. Such information as may be necessary to enable the department to carry out the department's duties under other federal or other state laws as is required for traditional hazardous waste permits under subdivision r of subsection 2 of section 33.1-24-06-17; and
- i. Any other information the department decides is necessary for demonstrating compliance with sections 33.1-24-06-30 through 33.1-24-06-35 or for determining any additional remedial action plan conditions that are necessary to protect human health and the environment.
- 5. Confidentiality of remedial action plan information. The owner or operator may assert any such claim at the time that the owner or operator submits the remedial action plan application or other submissions by stamping the words "confidential business information" on each page containing such information. If the owner or operator asserts a claim at the time of the submission, the department will treat the information as confidential and will not release this information to the public. If the owner or operator does not assert a claim at the time of the submission, the department may make the information available to the public without further notice to the owner or operator. The department will deny any requests for confidentiality of an owner's or operator's name or address, or both.
- 6. The owner or operator must submit the completed, signed application for a remedial action plan to the department for approval.
- 7. If the owner or operator submits an application for a remedial action plan as a part of another document, the owner or operator must clearly identify the components of that document that constitute the remedial action plan application.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-32. Remedial action plan approval process.

- 1. Completeness and technical review. The department will not issue a permit before receiving a complete application for a remedial action plan. An application for a remedial action plan is complete when the department receives an application form and any supplemental information which is completed to the department's satisfaction. The completeness of any application for a permit shall be judged independently of the status

of any other permit application or permit for the same facility or activity. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in subsection 10 of section 33.1-24-06-01. The department may deny a permit for a remedial action plan before receiving a complete application for a permit.

a. If the department tentatively finds that a remedial action plan application includes all of the information required by subsection 4 of section 33.1-24-06-31 and that the proposed remediation waste management activities meet the regulatory standards, the department may make a tentative decision to approve the remedial action plan application. The department will then prepare a draft remedial action plan and provide an opportunity for public comment before making a final decision on the remedial action plan application, according to sections 33.1-24-06-30 through 33.1-24-06-35.

b. If the department tentatively finds that the remedial action plan application does not include all of the information required by subsection 4 of section 33.1-24-06-31 or that the proposed remediation waste management activities do not meet the regulatory standards, the department may request additional information or ask the owner or operator to correct deficiencies in the application. If the owner or operator fails or refuses to provide any additional information the department requests, or to correct any deficiencies in the remedial action plan application, the department may make a tentative decision to deny the remedial action plan application. After making this tentative decision, the department will prepare a notice of intent to deny the remedial action plan application ("notice of intent to deny") and provide an opportunity for public comment before making a final decision on the remedial action plan application, according to the requirements in sections 33.1-24-06-30 through 33.1-24-06-35. The department may deny the remedial action plan application either in its entirety or in part.

2. Contents of the draft remedial action plan. If the department prepares a draft remedial action plan, the department must include the following information:

a. Information required under subdivisions a through f of subsection 4 of section 33.1-24-06-31;

b. The following terms and conditions:

(1) Terms and conditions necessary to ensure that the operating requirements specified in the remedial action plan comply with applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929 (including any recordkeeping and reporting requirements). In satisfying this provision, the department may incorporate, expressly or by reference, applicable requirements of sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929 into the remedial action plan or establish site-specific conditions as required or allowed by sections 33.1-24-05-01 through 33.1-24-05-559 and 33.1-24-05-800 through 33.1-24-05-929;

(2) Terms and conditions in section 33.1-24-06-04;

- (3) Terms and conditions for modifying, revoking and reissuing, and terminating the remedial action plan, as provided in subsection 1 of section 33.1-24-06-33; and
- (4) Any additional terms or conditions that the department determines are necessary to protect human health and the environment, including any terms and conditions necessary to respond to spills and leaks during use of any units permitted under the remedial action plan; and
- c. If the draft remedial action plan is part of another document, as described in paragraph 2 of subdivision d of subsection 1 of section 33.1-24-06-30, the department must clearly identify the components of that document that constitute the draft remedial action plan.
- 3. Once the department has prepared the draft remedial action plan or notice of intent to deny, then the department must also prepare the following documents:
 - a. A fact sheet that briefly describes the derivation of the conditions of the draft remedial action plan and the reasons for them, or the rationale for the notice of intent to deny;
 - b. The following documentation, including:
 - (1) The remedial action plan application, and any supporting data furnished by the applicant;
 - (2) The draft remedial action plan or notice of intent to deny;
 - (3) The fact sheet and all documents cited therein (material readily available at the department or published material that is generally available need not be physically included, as long as it is specifically referred to in the fact sheet); and
 - (4) Any other documents that support the decision to approve or deny the remedial action plan; and
 - c. Information contained in subdivision b must be available for review by the public upon request.
- 4. Procedures for public comment.
 - a. The department must:
 - (1) Send notice to the owner or operator of the intention to approve or deny the remedial action plan application and send the owner or operator a copy of the fact sheet;
 - (2) Publish a notice of the intention to approve or deny the remedial action plan application in a major local newspaper of general circulation;
 - (3) Broadcast the intention to approve or deny the remedial action plan application over a local radio station; and

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- (4) Send a notice of the intention to approve or deny the remedial action plan application to each unit of local government having jurisdiction over the area in which the site is located, and to each state agency having any authority under state law with respect to any construction or operations at the site.
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- b. The notice required by subdivision a must provide an opportunity for the public to submit written comments on the draft remedial action plan or notice of intent to deny within at least forty-five days.
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- c. The notice required by subdivision a must include:
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- (1) The name and address of the office processing the remedial action plan application;
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- (2) The name and address of the remedial action plan applicant, and if different, the remediation waste management site or activity the remedial action plan will regulate;
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- (3) A brief description of the activity the remedial action plan will regulate;
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- (4) The name, address, and telephone number of the department's person from whom interested persons may obtain further information, including copies of the draft remedial action plan or notice of intent to deny, fact sheet, and the remedial action plan application;
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- (5) A brief description of the comment procedures in this subsection, and any other procedures by which the public may participate in the remedial action plan decision;
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- (6) If a hearing is scheduled, the date, time, location, and purpose of the hearing;
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- (7) If a hearing is not scheduled, a statement of procedures to request a hearing;
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- (8) The location of additional information and times when it will be open for public inspection; and
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- (9) Any additional information the department considers necessary or proper.
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- d. If, within the comment period, the department receives written notice of opposition to the intention to approve or deny the remedial action plan application and a request for a hearing, the department must hold an informal public hearing to discuss issues relating to the approval or denial of the remedial action plan application. The department may also determine on the department's own initiative that an informal hearing is appropriate. The hearing must include an opportunity for any person to present written or oral comments. Whenever possible, the department must schedule this hearing at a location convenient to the nearest population center to the remediation waste management site and give notice according to the requirements in subdivision a. This notice must, at a minimum, include the information required by subdivision c and:
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- (1) Reference to the date of any previous public notices relating to the remedial action plan application;
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- (2) The date, time, and place of the hearing; and
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(3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

5. Basis for final decision.

a. The department must consider and respond to any significant comments raised during the public comment period, or during any hearing on the draft remedial action plan or notice of intent to deny, and revise the draft remedial action plan based on those comments, as appropriate.

b. If the department determines that the remedial action plan includes the information and terms and conditions required in subsection 2, then the department will issue a final decision approving the remedial action plan and, in writing, notify the owner or operator and all commenters on the draft remedial action plan that the remedial action plan application has been approved.

c. If the department determines that the remedial action plan does not include the information required in subsection 2, then the department will issue a final decision denying the remedial action plan and, in writing, notify the owner or operator and all commenters on the draft remedial action plan that the remedial action plan application has been denied.

d. If the department's final decision is that the tentative decision to deny the remedial action plan application was incorrect, the department will withdraw the notice of intent to deny and proceed to prepare a draft remedial action plan, according to the requirements in sections 33.1-24-06-30 through 33.1-24-06-35.

e. When the department issues a final remedial action plan decision, the final decision must refer to the procedures for appealing the decision under subsection 6.

f. The department shall maintain the following documents:

(1) All comments received during the public comment period;

(2) Tapes or transcripts of any hearings;

(3) Any written materials submitted at these hearings;

(4) The responses to comments;

(5) Any new material placed in the record since the draft remedial action plan was issued;

(6) Any other documents supporting the remedial action plan; and

(7) A copy of the final remedial action plan.

g. The department must make information available for review by the public upon request.

6. Administrative appeal process of the department's decision to approve or deny a remedial action plan application.

a. Any commenter on the draft remedial action plan or notice of intent to deny, or any participant in any public hearing on the draft remedial action plan, may appeal the department's decision to approve or deny the remedial action plan application. Any person who did not file comments, or did not participate in any public hearing on the draft remedial action plan, may petition for administrative review only to the extent of the changes from the draft to the final remedial action plan decision. Appeals of remedial action plans may be made to the same extent as for final permit decisions under section 33.1-24-07-11. Instead of the notice required under subsection 3 of section 33.1-24-07-14, and section 33.1-24-07-06, the department will give public notice of any grant of review of remedial action plans through the same means used to provide notice under subsection 4 of section 33.1-24-06-32. The notice will include:

(1) The briefing schedule for the appeal as provided by the department;

(2) A statement that any interested person may file an amicus brief with the department; and

(3) The information specified in subdivision c of subsection 4, as appropriate.

b. This appeal is a prerequisite to seeking judicial review of these department actions.

7. Effective date of a remedial action plan. A remedial action plan becomes effective thirty days after the department notifies the owner or operator and all commenters that the remedial action plan is approved unless:

a. The department specifies a later effective date in the final decision;

b. The owner or operator or another person has appealed the remedial action plan under subsection 6 (if the remedial action plan is appealed, and the request for review is granted under subsection 6, conditions of the remedial action plan are stayed according to section 33.1-24-07-12); or

c. No commenters requested a change in the draft remedial action plan, in which case the remedial action plan becomes effective immediately when it is issued.

8. The owner or operator may not begin physical construction of new units permitted under the remedial action plan for treating, storing, or disposing of hazardous remediation waste before receiving a finally effective remedial action plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-33. Modification, revocation and reissuance, or termination of a remedial action plan.

1. In the remedial action plan, the department must specify, either directly or by reference, procedures for future modifications, revocations and reissuance, or terminations of the remedial action plan. These procedures must provide adequate opportunities for public review and comment on any modification, revocation and reissuance, or termination that would significantly change the management of the remediation waste, or that otherwise

merits public review and comment. If the remedial action plan has been incorporated into a traditional hazardous waste permit, as allowed under subdivision c of subsection 2 of section 33.1-24-06-30, then the remedial action plan will be modified according to the applicable requirements in sections 33.1-24-06-11, 33.1-24-06-12, and 33.1-24-06-14, revoked and reissued according to the applicable requirements in sections 33.1-24-06-12 and 33.1-24-06-13, or terminated according to the applicable requirements of section 33.1-24-06-13.

2. Modifications by the department.

a. The department may modify the final remedial action plan on the department's own initiative only if one or more of the following reasons exist. If one or more of these reasons do not exist, then the department will not modify the final remedial action plan, except at the request of the owner or operator. Reasons for modification are:

- (1) The owner or operator made material and substantial alterations or additions to the activity that justify applying different conditions;
- (2) The department finds new information that was not available at the time of remedial action plan issuance and would have justified applying different remedial action plan conditions at the time of issuance;
- (3) The standards or regulations on which the remedial action plan was based have changed because of new or amended statutes, standards, or regulations, or by judicial decision after the remedial action plan was issued;
- (4) If the remedial action plan includes any schedules of compliance, the department may find reasons to modify the compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the owner or operator have little or no control and for which there is no reasonably available remedy;
- (5) The owner or operator is not in compliance with conditions of the remedial action plan;
- (6) The owner or operator failed in the application or during the remedial action plan issuance process to disclose fully all relevant facts, or the owner or operator misrepresented any relevant facts at the time;
- (7) The department has determined that the activity authorized by the remedial action plan endangers human health or the environment and can only be remedied by modifying; or
- (8) The owner or operator have notified the department (as required in the remedial action plan under subdivision c of subsection 12 of section 33.1-24-06-04) of a proposed transfer of a remedial action plan.

b. Notwithstanding any other provision in this subsection, when the department reviews a remedial action plan for a land disposal facility under subsection 6, the department may modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in chapters 33.1-24-01 through 33.1-24-04, 33.1-24-06, 33.1-24-07, sections 33.1-24-05-01 through 33.1-

24-05-249, 33.1-24-05-300 through 33.1-24-05-559, and 33.1-24-05-800 through 33.1-24-05-929.

c. The department will not reevaluate the suitability of the facility location at the time of remedial action plan modification unless new information or standards indicate that a threat to human health or the environment exists that was unknown when the remedial action plan was issued.

3. Revocation and reissuance of a remedial action plan.

a. The department may revoke and reissue the final remedial action plan on the department's own initiative only if one or more reasons for revocation and reissuance exist. If one or more reasons do not exist, then the department will not modify or revoke and reissue the final remedial action plan, except at the request of the owner or operator. Reasons for modification or revocation and reissuance are the same as the reasons listed for remedial action plan modifications in paragraphs 5 through 8 of subdivision a of subsection 2 if the department determines that revocation and reissuance of the remedial action plan is appropriate.

b. The department will not reevaluate the suitability of the facility location at the time of remedial action plan revocation and reissuance, unless new information or standards indicate that a threat to human health or the environment exists that was unknown when the remedial action plan was issued.

4. Termination or denial of a renewal application of a remedial action plan. The department may terminate the final remedial action plan on the department's own initiative, or deny the renewal application for the same reasons as those listed for remedial action plan modifications in paragraphs 5 through 7 of subdivision a of subsection 2 if the department determines that termination of the remedial action plan or denial of the remedial action plan renewal application is appropriate.

5. Administrative appeal of a decision to deny a modification, revocation and reissuance, or termination of a remedial action plan.

a. Any commenter on the modification, revocation and reissuance, or termination, or any person who participated in any hearing on these actions, may appeal the department's decision to approve a modification, revocation and reissuance, or termination of the remedial action plan, according to subsection 6 of section 33.1-24-06-32. Any person who did not file comments or did not participate in any public hearing on the modification, revocation and reissuance, or termination may petition for administrative review only of the changes from the draft to the final remedial action plan decision.

b. Any commenter on the modification, revocation and reissuance, or termination, or any person who participated in any hearing on these actions, may informally appeal the department's decision to deny a request for modification, revocation and reissuance, or termination to the department. Any person who did not file comments, or did not participate in any public hearing on the modification, revocation and reissuance, or termination may petition for administrative review only of the changes from the draft to the final remedial action plan decision.

c. The process for informal appeals of remedial action plans is as follows:

- (1) The person appealing the decision must send a letter to the department. The letter must briefly set forth the relevant facts.
 - (2) The department has sixty days after receiving the letter to act on it.
 - (3) If the department does not take action on the letter within sixty days after receiving it, the appeal shall be considered denied.
- d. This informal appeal is a prerequisite to seeking judicial review of these department actions.
6. Expiration of a remedial action plan. Remedial action plans are effective for a fixed term of five years. Every five years any remedial action plan for hazardous waste land disposal must be modified as necessary to assure that the owner or operator continues to comply with currently applicable requirements in North Dakota Century Code sections 23.1-04-05 and 23.1-04-08, and take into account improvements in technology as well as applicable rules.
 7. Renewal. Any facility with an effective remedial action plan shall submit a new application at least one hundred eighty days before the expiration date of the effective remedial action plan unless permission for a later date has been granted by the department (the department shall not grant permission for applications to be submitted later than the expiration date of the existing remedial action plan). The owner or operator must follow the process for application and issuance of remedial action plans in sections 33.1-24-06-30 through 33.1-24-06-35.
 8. Continuance of an expiring remedial action plan. The conditions of an expired remedial action plan continue in force until the effective date of a new remedial action plan if:
 - a. The owner or operator has submitted a timely application which is a complete application for a new remedial action plan; and
 - b. The department, through no fault of the owner or operator, does not issue a new remedial action plan with an effective date on or before the expiration date of the previous remedial action plan (for example, when issuance is impractical due to time or resource constraints) or the denial of the remedial action plan application.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-34. Remedial action plan operations.

1. **Recordkeeping requirements.** The owner or operator is required to keep records of:
 - a. All data used to complete remedial action plan applications and any supplemental information that the owner or operator submits for a period of at least three years from the date the application is signed; and
 - b. Any operating records and other records the department requires the owner or operator to maintain as a condition of the remedial action plan.
2. **Time period computation.**

- a. Any time period scheduled to begin on the occurrence of an act or event must begin on the day after the act or event. (For example, if the remedial action plan specifies that the owner or operator must close a staging pile within one hundred eighty days after the operating term for that staging pile expires, and the operating term expires on June first, then June second counts as day one of the one hundred eighty days, and the owner or operator would have to complete closure by November twenty-eighth.)
- b. Any time period scheduled to begin before the occurrence of an act or event must be computed so that the period ends on the day before the act or event. (For example, if the owner or operator is transferring ownership or operational control of the site, and transfers the remedial action plan to the new owner or operator, the new owner or operator must submit a revised remedial action plan application no later than ninety days before the scheduled change. Therefore, if the owner or operator plans to change ownership on January first, the new owner or operator must submit the revised remedial action plan application no later than October third, so that the ninetieth day would be December thirty-first.)
- c. If the final day of any time period falls on a weekend or legal holiday, the time period must be extended to the next working day. (For example, if the owner or operator wishes to appeal the department's decision to modify the remedial action plan, then the owner or operator must petition the department within thirty days after the department has issued the final remedial action plan decision. If the thirtieth day falls on Sunday, then the owner or operator may submit the appeal by the Monday after. If the thirtieth day falls on July fifth, then the owner or operator may submit the appeal by July fifth.)
- d. Whenever a party or interested person has the right to or is required to act within a prescribed period after the service of notice or other paper upon them by mail, three days must be added to the prescribed term. (For example, if the owner or operator wishes to appeal the department's decision to modify the remedial action plan, then the owner or operator must petition the department within thirty days after the department has issued the final remedial action plan decision. However, if the department notifies the owner or operator of the decision by mail, then the owner or operator may have thirty-three days to petition the department.)

3. Transfer of a remedial action plan to a new owner or operator.

- a. An owner or operator may transfer the remedial action plan to a new owner or operator, provided the owner or operator follows the requirements specified in the remedial action plan for modification to identify the new owner or operator, and incorporate any other necessary requirements with prior approval of the department. These modifications do not constitute "significant" modifications for purposes of subsection 1 of section 33.1-24-05-33. The new owner or operator must submit a revised remedial action plan application no later than ninety days before the scheduled change along with a written agreement containing a specific date for transfer of remedial action plan responsibility between the owner or operator and the new owner or operator.
- b. When a transfer of ownership or operational control occurs, the owner or operator as the old owner or operator must comply with the applicable requirements in sections 33.1-24-05-74 through 33.1-24-05-88 until the new owner or operator has

demonstrated compliance with the financial assurance requirements. The new owner or operator must demonstrate compliance with sections 33.1-24-05-74 through 33.1-24-05-88 within six months of the date of the change in ownership or operational control of the facility or remediation waste management site. When the new owner or operator demonstrates compliance with sections 33.1-24-05-74 through 33.1-24-05-88 to the department, the department will notify the old owner or operator that that person no longer needs to comply with sections 33.1-24-05-74 through 33.1-24-05-88 as of the date of demonstration.

4. **Noncompliance and program reporting by the department.** The department must report noncompliance with remedial action plans according to the provisions of section 33.1-24-06-15.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08, 23.1-04-15; S.L. 2017, ch. 199, § 19

33.1-24-06-35. Remedial action plans for offsite locations.

For offsite locations:

1. The owner or operator may request a remedial action plan for remediation waste management activities at a location removed from the area where the remediation wastes originated if the owner or operator believes such a location would be more protective than the contaminated area or areas in close proximity.
2. If the department determines that an alternative location, removed from the area where the remediation waste originated, is more protective than managing remediation waste at the area of contamination or areas in close proximity, then the department may approve a remedial action plan for this alternative location.
3. The owner or operator must request the remedial action plan, and the department will approve or deny the remedial action plan, according to the procedures and requirements in sections 33.1-24-06-30 through 33.1-24-06-35.
4. A remedial action plan for an alternative location must also meet the following requirements, which the department must include in the remedial action plan for such locations:
 - a. The remedial action plan for the alternative location must be issued to the person responsible for the cleanup from which the remediation wastes originated;
 - b. The remedial action plan is subject to the expanded public participation requirements in sections 33.1-24-07-25 through 33.1-24-07-27; and
 - c. The remedial action plan is subject to the public notice requirements in subsection 3 of section 33.1-24-07-06.
5. These alternative locations are remediation waste management sites and retain the following benefits of remediation waste management sites:
 - a. Exclusion from facilitywide corrective action under section 33.1-24-05-58; and

b. Application of subsection 10 of section 33.1-24-05-01 in lieu of sections 33.1-24-05-02 through 33.1-24-05-36.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-36. [Reserved]

33.1-24-06-37. [Reserved]

33.1-24-06-38. [Reserved]

33.1-24-06-39. [Reserved]

33.1-24-06-40. [Reserved]

33.1-24-06-41. [Reserved]

33.1-24-06-42. [Reserved]

33.1-24-06-43. [Reserved]

33.1-24-06-44. [Reserved]

33.1-24-06-45. Standardized permit - General information.

A hazardous waste standardized permit is a special type of permit that authorizes an owner or operator to manage hazardous waste. A standardized permit is issued under sections 33.1-24-07-40 through 33.1-24-07-54 and sections 33.1-24-06-45 through 33.1-24-06-85.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-46. [Reserved]

33.1-24-06-47. [Reserved]

33.1-24-06-48. Eligibility for a standardized permit.

1. The owner or operator may be eligible for a standardized permit if the facility:

a. Generates hazardous waste and then stores or nonthermally treats the hazardous waste onsite in containers, tanks, or containment buildings; or

b. Receives hazardous waste generated offsite by a generator under the same ownership as the receiving facility, and then stores or nonthermally treats the hazardous waste in containers, tanks, or containment buildings.

c. The department will inform the owner or operator of eligibility when a decision is made on the permit application.

2. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-49. [Reserved]

33.1-24-06-50. [Reserved]

33.1-24-06-51. [Reserved]

33.1-24-06-52. Conditions applicable to a standardized permit.

The following requirements of chapter 33.1-24-06 apply to a standardized permit:

1. Sections 33.1-24-06-01, 33.1-24-06-09, 33.1-24-06-10, 33.1-24-06-15, 33.1-24-01-04, and subdivision a of subsection 3 of section 33.1-24-01-05.
2. Section 33.1-24-06-03, subsection 2 of section 33.1-24-06-13, and subsection 1 of section 33.1-24-06-17, and 33.1-24-01-16.
3. Sections 33.1-24-06-04, 33.1-24-06-05, 33.1-24-06-07, and 33.1-24-06-08.
4. Sections 33.1-24-06-11, 33.1-24-06-12, and subsection 1 of section 33.1-24-06-13.
5. Sections 33.1-24-06-02 and 33.1-24-06-06.
6. Subsection 6 of section 33.1-24-06-19.
7. Section 33.1-24-06-16.
8. Sections 33.1-24-06-45 through 33.1-24-06-85.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-53. [Reserved]

33.1-24-06-54. [Reserved]

33.1-24-06-55. [Reserved]

33.1-24-06-56. Standardized permit application process.

To apply for a standardized permit, the owner or operator must follow the procedures in sections 33.1-24-07-40 through 33.1-24-07-54, and sections 33.1-24-06-45 through 33.1-24-06-85.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-57. Standardized permit application.

The information in subsections 1 through 10 will be the basis of the standardized permit application. This information must be submitted to the department when submitting a notice of

intent under subsection 2 of section 33.1-24-07-42 requesting coverage under a hazardous waste standardized permit:

1. The part A information described in subsection 1 of section 33.1-24-06-17.
2. A meeting summary and other materials required by section 33.1-24-07-25.
3. Documentation of compliance with the location standards of section 33.1-24-05-968.
4. Information that allows the department to carry out obligations under other state and federal laws required in section 33.1-24-06-09.
5. Solid waste management unit information required by subsection 4 of section 33.1-24-06-17.
6. A certification meeting the requirements of section 33.1-24-06-62, and an audit of the facility's compliance status with sections 33.1-24-05-950 through 33.1-24-05-1149 as required by section 33.1-24-06-62.
7. A closure plan prepared in accordance with sections 33.1-24-05-1040 through 33.1-24-05-1047.
8. The most recent closure cost estimate for the facility prepared under section 33.1-24-05-1062, and a copy of the documentation required to demonstrate financial assurance under section 33.1-24-05-1063. For a new facility, the required documentation must be compiled sixty days before the initial receipt of hazardous wastes.
9. If wastes generated offsite are managed, the waste analysis plan.
10. If waste generated from offsite are managed, documentation showing that the waste generator and the offsite facility are under the same ownership.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-58. [Reserved]

33.1-24-06-59. [Reserved]

33.1-24-06-60. [Reserved]

33.1-24-06-61. [Reserved]

33.1-24-06-62. Certification requirements.

A signed certification based on an audit of the facility's compliance with sections 33.1-24-05-950 through 33.1-24-05-1149 must be submitted.

1. The certification must read: I certify under penalty of law that:
 - a. I have personally examined and am familiar with the report containing the results of an audit conducted of my facility's compliance status with sections 33.1-24-05-950 through 33.1-24-05-1149, which supports this certification. Based on my

inquiry of those individuals immediately responsible for conducting the audit and preparing the report, I believe that (include paragraph 1 and 2, whichever applies):

(1) My existing facility complies with all applicable requirements of sections 33.1-24-05-950 through 33.1-24-05-1149 and will continue to comply until the expiration of the permit; or

(2) My facility has been designed, and will be constructed and operated to comply with all applicable requirements of sections 33.1-24-05-950 through 33.1-24-05-1149, and will continue to comply until expiration of the permit.

b. I will make all information that I am required to maintain at my facility by sections 33.1-24-06-65 through 33.1-24-06-80 readily available for review by the department and the public; and

c. I will continue to make all information required by sections 33.1-24-06-65 through 33.1-24-06-80 available until the permit expires. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

2. This certification must be signed following the requirements of subdivisions a through c of subsection 1 of section 33.1-24-06-03.

3. This certification must be based upon an audit that the owner or operator conducted of the facility's compliance status with sections 33.1-24-05-950 through 33.1-24-05-1149. A written audit report, signed and certified as accurate by the auditor, must be submitted to the department with the subsection 2 of section 33.1-24-07-42 notice of intent.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-63. [Reserved]

33.1-24-06-64. [Reserved]

33.1-24-06-65. Recordkeeping requirements.

The owner or operator must keep the following information at the facility:

1. A general description of the facility.

2. Chemical and physical analyses of the hazardous waste and hazardous debris handled at the facility. At a minimum, these analyses must contain all the information for treating or storing the wastes properly under the requirements of sections 33.1-24-05-950 through 33.1-24-05-1149.

3. A copy of the waste analysis plan required by subsection 2 of section 33.1-24-05-963.

4. A description of the security procedures and equipment required by section 33.1-24-05-964.

5. A copy of the general inspection schedule required by subsection 2 of section 33.1-24-05-965. The inspection schedule must include applicable requirements of sections 33.1-

24-05-1084, 33.1-24-05-1103, 33.1-24-05-1105, 33.1-24-05-403, 33.1-24-05-422, 33.1-24-05-423, 33.1-24-05-428, and 33.1-24-05-458.

6. A justification of any modification of the preparedness and prevention requirements of sections 33.1-24-05-980 through 33.1-24-05-986.
7. A copy of the contingency plan required by sections 33.1-24-05-990 through 33.1-24-05-998.
8. A description of procedures, structures, or equipment used at the facility to:
 - a. Prevent hazards in unloading operations (for example, use ramps, special forklifts);
 - b. Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, with berms, dikes, trenches);
 - c. Prevent contamination of water supplies;
 - d. Mitigate effects of equipment failure and power outages;
 - e. Prevent undue exposure of personnel to hazardous waste (for example, requiring protective clothing); and
 - f. Prevent releases to atmosphere.
9. A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required by section 33.1-24-05-967.
10. Traffic pattern, estimated volume (number, types of vehicles) and control (for example, show turns across traffic lanes, and stacking lanes; describe access road surfacing and load bearing capacity; show traffic control signals).
11. [Reserved]
12. An outline of both the introductory and continuing training programs used to prepare employees to operate or maintain the facility safely as required by section 33.1-24-05-966. A brief description of how training will be designed to meet actual job tasks under subdivision b of subsection 1 of section 33.1-24-05-966 requirements.
13. A copy of the closure plan required by section 33.1-24-05-1042. Include, where applicable, as part of the plans, specific requirements in sections 33.1-24-05-1086, 33.1-24-05-1111, and 33.1-24-05-1138.
14. [Reserved]
15. The most recent closure cost estimate for the facility prepared under section 33.1-24-05-1062 and a copy of the documentation required to demonstrate financial assurance under section 33.1-24-05-1063. For a new facility, the required documentation must be compiled sixty days before the initial receipt of hazardous wastes.
16. [Reserved]
17. Where applicable, a copy of the insurance policy or other documentation that complies with the liability requirements of section 33.1-24-05-1067. For a new facility, documentation showing the amount of insurance meeting the specification of subsection

1 of section 33.1-24-05-1067 that is planned to be in effect before initial receipt of hazardous waste for treatment or storage.

18. [Reserved]

19. A topographic map showing a distance of one thousand feet around the facility at a scale of two and one half centimeters (one inch) equal to not more than sixty one meters (two hundred feet). The map must show elevation contours. The contour interval must show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of one and one half meters (five feet), if relief is greater than six and one tenth meters (twenty feet), or an interval of six tenths meters (two feet), if relief is less than six and one tenth meters (twenty feet). If the facility is in a mountainous area, use large contour intervals to adequately show topographic profiles of facilities. The map must clearly show the following:

a. Map scale and date;

b. One hundred year flood plain area;

c. Surface waters including intermittent streams;

d. Surrounding land uses (residential, commercial, agricultural, recreational);

e. A wind rose (for example, prevailing wind speed and direction);

f. Orientation of the map (north arrow);

g. Legal boundaries of the facility site;

h. Access control (fences, gates);

i. Injection and withdrawal wells both onsite and offsite;

j. Buildings; treatment, storage, or disposal operations; or other structure (recreation areas, runoff control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities);

k. Barriers for drainage or flood control; and

l. Location of operational units within the facility, where hazardous waste is (or will be) treated or stored (including equipment cleanup areas).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-66. [Reserved]

33.1-24-06-67. [Reserved]

33.1-24-06-68. [Reserved]

33.1-24-06-69. [Reserved]

33.1-24-06-70. Information required for containers.

If hazardous waste is stored or treated in containers, the following information must be kept at the facility:

1. A description of the containment system to demonstrate compliance with the container storage area provisions of section 33.1-24-05-1083. This description must show the following:
 - a. Basic design parameters, dimensions, and materials of construction;
 - b. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;
 - c. Capacity of the containment system relative to the number and volume of containers to be stored;
 - d. Provisions for preventing or managing run-on; and
 - e. How accumulated liquids can be analyzed and removed to prevent overflow.
2. For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with subsection 3 of section 33.1-24-05-1083, including:
 - a. Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and
 - b. A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.
3. Sketches, drawings, or data demonstrating compliance with section 33.1-24-05-1084 (location of buffer zone (fifteen meters or fifty feet) and containers holding ignitable or reactive wastes) and subsection 3 of section 33.1-24-05-1085 (location of incompatible wastes in relation to each other), where applicable.
4. Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with subsections 1 and 2 of section 33.1-24-05-1085 and subsections 2 and 3 of section 33.1-24-05-967.
5. Information on air emission control equipment as required by section 33.1-24-06-80.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-71. [Reserved]

33.1-24-06-72. [Reserved]

33.1-24-06-73. Information required for tanks.

If hazardous waste is stored or treated in tanks, the following information must be kept at the facility:

1. A written assessment that is reviewed and certified by a qualified professional engineer on the structural integrity and suitability for handling hazardous waste of each tank system, as required under sections 33.1-24-05-1101 and 33.1-24-05-1102.
2. Dimensions and capacity of each tank.
3. Description of feed systems, safety cutoff, bypass systems, and pressure controls (for example, vents).
4. A diagram of piping, instrumentation, and process flow for each tank system.
5. A description of materials and equipment used to provide external corrosion protection, as required under section 33.1-24-05-1101.
6. For new tank systems, a detailed description of how the tank systems will be installed in compliance with sections 33.1-24-05-1102 and 33.1-24-05-1104.
7. Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of sections 33.1-24-05-1105 and 33.1-24-05-1106.
8. [Reserved].
9. Description of controls and practices to prevent spills and overflows, as required under section 33.1-24-05-1108.
10. For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of sections 33.1-24-05-1112 and 33.1-24-05-1113.
11. Information on air emission control equipment as required by section 33.1-24-06-80.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-74. [Reserved]

33.1-24-06-75. [Reserved]

33.1-24-06-76. Information required for equipment.

If the facility has equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 applies, the following information must be kept at the facility:

1. For each piece of equipment to which sections 33.1-24-05-420 through 33.1-24-05-449 applies:
 - a. Equipment identification number and hazardous waste management unit identification;
 - b. Approximate locations within the facility (for example, identify the hazardous waste management unit on a facility plot plan);
 - c. Type of equipment (for example, a pump or a pipeline valve);
 - d. Percent by weight of total organics in the hazardous waste stream at the equipment;
 - e. Hazardous waste state at the equipment (for example, gas or vapor, or both, or liquid); and
 - f. Method of compliance with the standard (for example, monthly leak detection and repair, or equipped with dual mechanical seals).
2. For facilities that cannot install a closed-vent system and control device to comply with sections 33.1-24-05-420 through 33.1-24-05-449 on the effective date that the facility becomes subject to sections 33.1-24-05-420 through 33.1-24-05-449 provisions, an implementation schedule as specified in subdivision b of subsection 1 of section 33.1-24-05-403.
3. Documentation that demonstrates compliance with the equipment standards in sections 33.1-24-05-422 and 33.1-24-05-429. This documentation must contain the records required under section 33.1-24-05-434.
4. Documentation to demonstrate compliance with section 33.1-24-05-430 must include the following information:
 - a. A list of all information references and sources used in preparing the documentation.
 - b. Records, including the dates, of each compliance test required by subsection 10 of section 33.1-24-05-403.
 - c. A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "Course 415--Control of Gaseous Emissions" (incorporated by reference in section 33.1-24-01-05) or other engineering texts acceptable to the department that present basic control device design information. The design analysis must address the vent stream characteristics and control device operation parameters as specified in paragraph 3 of subdivision d of subsection 2 of section 33.1-24-05-405.
 - d. A statement signed by the owner or operator and dated certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonable expected to occur.

- e. A statement signed by the owner or operator and dated certifying that the control device is designed to operate at an efficiency of ninety-five weight percent or greater.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-77. [Reserved]

33.1-24-06-78. [Reserved]

33.1-24-06-79. [Reserved]

33.1-24-06-80. Information required for air emissions control.

If the facility has air emission control equipment subject to sections 33.1-24-05-450 through 33.1-24-05-474, the following information must be kept at the facility:

1. Documentation for each floating roof cover installed on a tank subject to subdivisions a and b of subsection 4 of section 33.1-24-05-454 that includes information the owner or operator prepared or the cover manufacturer or vendor, or both, provided describing the cover design, and the owner's or operator's certification that the cover meets applicable design specifications listed in subdivision a of subsection 5 or subdivision a of subsection 6 of section 33.1-24-05-454.
2. Identification of each container area subject to the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 and the owner's or operator's certification that the requirements of sections 33.1-24-05-450 through 33.1-24-05-474 are met.
3. Documentation for each enclosure used to control air pollutant emissions from tanks or containers under the requirements of subdivision e of subsection 4 of section 33.1-24-05-454 or paragraph 2 of subdivision a of subsection 5 of section 33.1-24-05-456. The owner or operator must include records for the most recent set of calculations and measurements performed to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T - Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
4. [Reserved]
5. Documentation for each closed vent system and control device installed under the requirements of section 33.1-24-05-457 that includes design and performance information as specified in paragraphs 3 and 4 of subdivision cc of subsection 2 of section 33.1-24-06-17.
6. An emission monitoring plan for both Method 21 in 40 CFR part 60, appendix A, and control device monitoring methods. This plan must include the following information--monitoring points, monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-81. [Reserved]

33.1-24-06-82. [Reserved]

33.1-24-06-83. [Reserved]

33.1-24-06-84. [Reserved]

33.1-24-06-85. Permit modification.

The owner or operator can modify a hazardous waste standardized permit by following the procedures found in sections 33.1-24-07-51 through 33.1-24-07-54.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-06-86. [Reserved]

33.1-24-06-87. [Reserved]

33.1-24-06-88. [Reserved]

33.1-24-06-89. [Reserved]

33.1-24-06-90. [Reserved].

33.1-24-06-91. [Reserved]

33.1-24-06-92. [Reserved]

33.1-24-06-93. [Reserved]

33.1-24-06-94. [Reserved]

33.1-24-06-95. [Reserved]

33.1-24-06-96. [Reserved]

33.1-24-06-97. [Reserved]

33.1-24-06-98. [Reserved]

33.1-24-06-99. [Reserved]

33.1-24-06-100. Options for incinerators, cement kilns, lightweight aggregate kilns, solid fuel boilers, liquid fuel boilers, and hydrochloric acid production furnaces to minimize emissions from startup, shutdown, and malfunction events.

1. Facilities with existing permits.

- a. Revisions to permit conditions after documenting compliance with maximum achievable control technology. The owner or operator of a hazardous waste permitted incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace may request that the department address permit conditions that minimize emissions from startup, shutdown, and

malfunction events under any of the following options when requesting removal of permit conditions that are no longer applicable according to subsection 2 of section 33.1-24-05-144 and subsection 2 of section 33.1-24-05-525:

(1) Retain relevant permit conditions. Under this option, the department will:

(a) Retain permit conditions that address releases during startup, shutdown, and malfunction events, including releases from emergency safety vents, as these events are defined in the facility's startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2); and

(b) Limit applicability of those permit conditions only to when the facility is operating under the facility's startup, shutdown, and malfunction plan.

(2) Revise relevant permit conditions.

(a) Under this option, the department will:

[1] Identify a subset of relevant existing permit requirements, or develop alternative permit requirements, that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information, including the source's startup, shutdown, and malfunction plan, design, and operating history.

[2] Retain or add these permit requirements to the permit to apply only when the facility is operating under the facility's startup, shutdown, and malfunction plan.

(b) Changes that may significantly increase emissions.

[1] The permittee must notify the department in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. The permittee must notify the department of such changes within five days of making such changes. The permittee must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

[2] The department may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

[a] Upon permit renewal, or, if warranted;

[b] By modifying the permit under subsection 1 of section 33.1-24-06-12 or section 33.1-24-06-14.

[c] Remove permit conditions. Under this option:

{1} The owner or operator must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B); and

{2} The department will remove permit conditions that are no longer applicable according to subsection 2 of section 33.1-24-05-144 and subsection 2 of section 33.1-24-05-525.

b. Addressing permit conditions upon permit reissuance. The owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that has conducted a comprehensive performance test and submitted to the department a notification of compliance documenting compliance with the standards of 40 CFR part 63, subpart EEE, may request in the application to reissue the permit for the combustion unit that the department control emissions from startup, shutdown, and malfunction events under any of the following options:

(1) Hazardous waste option A. Under this option, the department will:

(a) Include, in the permit, conditions that ensure compliance with subsections 1 and 3 of section 33.1-24-05-149 or subdivision a of subsection 5 of section 33.1-24-05-527 and paragraph 3 of subdivision b of subsection 5 of section 33.1-24-05-527 to minimize emissions of toxic compounds from startup, shutdown, and malfunction events, including releases from emergency safety vents; and

(b) Specify that these permit requirements apply only when the facility is operating under the facility's startup, shutdown, and malfunction plan; or

(2) Hazardous waste option B.

(a) Under this option, the department will:

[1] Include in the permit conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information, including the source's startup, shutdown, and malfunction plan, design, and operating history; and

[2] Specify that these permit requirements apply only when the facility is operating under the facility's startup, shutdown, and malfunction plan.

(b) Changes that may significantly increase emissions.

[1] The permittee must notify the department in writing of changes to the startup, shutdown, and malfunction plan or changes to the design of the source that may significantly increase emissions of toxic compounds from startup, shutdown, or malfunction events, including releases from emergency safety vents. The permittee must notify the department of such changes within five days of

making such changes. The permittee must identify in the notification recommended revisions to permit conditions necessary as a result of the changes to ensure that emissions of toxic compounds are minimized during these events.

[2] The department may revise permit conditions as a result of these changes to ensure that emissions of toxic compounds are minimized during startup, shutdown, or malfunction events, including releases from emergency safety vents either:

[a] Upon permit renewal, or, if warranted;

[b] By modifying the permit under subsection 1 of section 33.1-24-06-12 or section 33.1-24-06-14; or

[c] Clean Air Act option. Under this option:

{1} The owner or operator must document that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B); and

{2} The department will omit from the permit conditions that are not applicable under subsection 2 of section 33.1-24-05-144 and subsection 2 of section 33.1-24-05-525.

2. Interim status facilities.

a. Interim status operations. In compliance with subsection 5 of section 33.1-24-06-16 and subsection 2 of section 33.1-24-05-525, the owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of subsection 5 of section 33.1-24-06-16 or sections 33.1-24-05-191 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, and 33.1-24-05-820 through 33.1-24-05-929 may control emissions of toxic compounds during startup, shutdown, and malfunction events under either of the following options after conducting a comprehensive performance test and submitting to the department a notification of compliance documenting compliance with the standards of 40 CFR part 63, subpart EEE:

(1) Hazardous waste option. Under this option, the owner or operator continues to comply with the interim status emission standards and operating requirements of subsection 5 of section 33.1-24-06-16 or sections 33.1-24-05-191 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, and 33.1-24-05-820 through 33.1-24-05-929 relevant to control of emissions from startup, shutdown, and malfunction events. Those standards and requirements apply only during startup, shutdown, and malfunction events; or

(2) Clean Air Act option. Under this option, the owner or operator is exempt from the interim status standards of subsection 5 of section 33.1-24-06-16 or sections 33.1-24-05-191 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, and 33.1-24-05-820 through 33.1-24-05-929 relevant to control of emissions of toxic compounds during startup, shutdown, and

malfunction events upon submission of written notification and documentation to the department that the startup, shutdown, and malfunction plan required under 40 CFR 63.1206(c)(2) has been approved by the department under 40 CFR 63.1206(c)(2)(ii)(B).

b. Operations under a subsequent hazardous waste permit. When an owner or operator of an incinerator, cement kiln, lightweight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace that is operating under the interim status standards of subsection 5 of section 33.1-24-06-16 or sections 33.1-24-05-191 through 33.1-24-05-249, 33.1-24-05-525 through 33.1-24-05-549, and 33.1-24-05-820 through 33.1-24-05-949 submits a hazardous waste permit application, the owner or operator may request that the department control emissions from startup, shutdown, and malfunction events under any of the options provided by subitems a, b, or c of item 2 of subparagraph b of paragraph 2 of subdivision b of subsection 1.

3. **New units.** Hazardous waste incinerator, cement kiln, light weight aggregate kiln, solid fuel boiler, liquid fuel boiler, or hydrochloric acid production furnace units that become subject to hazardous waste permit requirements after October 12, 2005, must control emissions of toxic compounds during startup, shutdown, and malfunction events, under either of the following options:

a. Comply with the requirements specified in 40 CFR 63.1206(c)(2); or

b. Request to include in the hazardous waste permit, conditions that ensure emissions of toxic compounds are minimized from startup, shutdown, and malfunction events, including releases from emergency safety vents, based on review of information including the source's startup, shutdown, and malfunction plan and design. The department will specify that these permit conditions apply only when the facility is operating under the facility's startup, shutdown, and malfunction plan.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

Appendix I
to Section 33.1-24-06-14 -
Classification of Permit Modification

<u>Modifications</u>	<u>Class</u>
<u>A. General Permit Provisions</u>	
1. <u>Administrative and informational changes.</u>	<u>1</u>
2. <u>Correction of typographical errors.</u>	<u>1</u>
3. <u>Equipment replacement or upgrading with functionally equivalent components (for example, pipes, valves, pumps, conveyors, controls).</u>	<u>1</u>
4. <u>Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee:</u>	
a. <u>To provide for more frequent monitoring, reporting, sampling, or maintenance.</u>	<u>1</u>
b. <u>Other changes.</u>	<u>2</u>
5. <u>Schedule of compliance:</u>	
a. <u>Changes in interim compliance dates, with prior approval of the department.</u>	<u>11</u>
b. <u>Extension of final compliance date.</u>	<u>3</u>
6. <u>Changes in expiration date of permit to allow earlier permit termination, with prior approval of the department.</u>	<u>11</u>
7. <u>Changes in ownership or operational control of a facility, provided the procedures of subsection 2 of section 33.1-24-06-11 are followed.</u>	<u>11</u>
8. <u>Changes to remove permit conditions that are no longer applicable (for example, because the standards upon which they are based are no longer applicable to the facility).</u>	<u>11</u>
9. <u>Changes to remove permit conditions applicable to a unit excluded under the provisions of section 33.1-24-02-04.</u>	<u>11</u>
10. <u>Changes in the expiration date of a permit issued to a facility at which all units are excluded under the provisions of section 33.1-24-02-04.</u>	<u>11</u>
<u>B. General Facility Standards</u>	
1. <u>Changes to waste sampling or analysis methods:</u>	
a. <u>To conform with department guidance or regulations.</u>	<u>1</u>
b. <u>To incorporate changes associated with F039 (multisource leachate) sampling or analysis methods.</u>	<u>1</u>
c. <u>To incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes.</u>	<u>11</u>
d. <u>Other changes.</u>	
2. <u>Changes to analytical quality assurance/control plan:</u>	
a. <u>To conform with department guidance or regulations.</u>	<u>1</u>

<u>Modifications</u>	<u>Class</u>
<u>b. Other changes.</u>	<u>2</u>
<u>3. Changes in procedures for maintaining the operating record.</u>	<u>1</u>
<u>4. Changes in frequency or content of inspection schedules.</u>	<u>2</u>
<u>5. Changes in the training plan:</u>	
<u>a. That affect the type or decrease the amount of training given to employees.</u>	<u>2</u>
<u>b. Other changes.</u>	<u>1</u>
<u>6. Contingency plan:</u>	
<u>a. Changes in emergency procedures (for example, spill or release response procedures).</u>	<u>2</u>
<u>b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed.</u>	<u>1</u>
<u>c. Removal of equipment from emergency equipment list.</u>	<u>2</u>
<u>d. Changes in name, address, or telephone number of coordinators or other persons or agencies identified in the plan.</u>	<u>1</u>
<u>7. Construction quality assurance plan:</u>	
<u>a. Changes that the construction quality assurance officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications.</u>	<u>1</u>
<u>b. Other changes.</u>	<u>2</u>
<u>Note: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.</u>	
<u>C. Ground Water Protection</u>	
<u>1. Changes to wells:</u>	
<u>a. Changes in the number, location, depth, or design of upgradient or downgradient wells of permitted ground water monitoring system.</u>	<u>2</u>
<u>b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well.</u>	<u>1</u>
<u>2. Changes in ground water sampling or analysis procedures or monitoring schedule, with prior approval of the department.</u>	<u>11</u>
<u>3. Changes in statistical procedure for determining whether a statistically significant change in ground water quality between upgradient and downgradient wells has occurred, with prior approval of the department.</u>	<u>11</u>
<u>4. Changes in point of compliance.</u>	<u>2</u>
<u>5. Changes in indicator parameters, hazardous constituents, or concentration limits (including alternate concentration limits):</u>	
<u>a. As specified in the ground water protection standard.</u>	<u>3</u>

<u>Modifications</u>	<u>Class</u>
<u>b. As specified in the detection monitoring program.</u>	<u>2</u>
<u>6. Changes to a detection monitoring program as required by subsection 8 of section 33.1-24-05-55, unless specified in this appendix.</u>	<u>2</u>
<u>7. Compliance monitoring program:</u>	
<u>a. Addition of compliance monitoring program as required by subdivision d of subsection 7 of section 33.1-24-05-55 and section 33.1-24-05-56.</u>	<u>3</u>
<u>b. Changes to a compliance monitoring program as required by subsection 10 of section 33.1-24-05-56, unless otherwise specified in this appendix.</u>	<u>2</u>
<u>8. Corrective action program:</u>	
<u>a. Addition of a corrective action program as required by subdivision b of subsection 8 of section 33.1-24-05-56 and section 33.1-24-05-57.</u>	<u>3</u>
<u>b. Changes to a corrective action program as required by subsection 8 of section 33.1-24-05-57, unless otherwise specified in this appendix.</u>	<u>2</u>
<u>D. Closure</u>	
<u>1. Changes to the closure plan:</u>	
<u>a. Changes in estimate of maximum extent of operations or maximum inventory of waste onsite at any time during the active life of the facility, with prior approval of the department.</u>	<u>11</u>
<u>b. Changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the department.</u>	<u>11</u>
<u>c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the department.</u>	<u>11</u>
<u>d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the department.</u>	<u>11</u>
<u>e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this appendix.</u>	<u>2</u>
<u>2. Creation of a new landfill unit as part of closure.</u>	<u>3</u>
<u>3. Addition of the following new units to be used temporarily for closure activities:</u>	
<u>a. Surface impoundments.</u>	<u>3</u>
<u>b. Incinerators.</u>	<u>3</u>
<u>c. Waste piles that do not comply with subsection 3 of section 33.1-24-05-130.</u>	<u>3</u>
<u>d. Waste piles that comply with subsection 3 of section 33.1-24-05-130.</u>	<u>2</u>
<u>e. Tanks or containers (other than specified below).</u>	<u>2</u>
<u>f. Tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the department.</u>	<u>11</u>

<u>Modifications</u>	<u>Class</u>
g. <u>Staging piles.</u>	<u>2</u>
E. <u>Postclosure</u>	
1. <u>Changes in name, address, or telephone number of contact in postclosure plan.</u>	<u>1</u>
2. <u>Extension of postclosure care period.</u>	<u>2</u>
3. <u>Reduction in the postclosure care period.</u>	<u>3</u>
4. <u>Changes to the expected year of final closure, where other permit conditions are not changed.</u>	<u>1</u>
5. <u>Changes in postclosure plan necessitated by events occurring during the active life of the facility, including partial and final closure.</u>	<u>2</u>
F. <u>Containers</u>	
1. <u>Modification or addition of container units:</u>	
a. <u>Resulting in greater than 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below.</u>	<u>3</u>
b. <u>Resulting in up to 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below.</u>	<u>2</u>
c. <u>Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" with prior approval of the department. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u>	<u>11</u>
2.	
a. <u>Modification of a container unit without increasing the capacity of the unit.</u>	<u>2</u>
b. <u>Addition of a roof to a container unit without alteration of the containment system.</u>	<u>1</u>
3. <u>Storage of different wastes in containers, except as provided in F(4) below:</u>	
a. <u>That require additional or different management practices from those authorized in the permit.</u>	<u>3</u>
b. <u>That do not require additional or different management practices from those authorized in the permit.</u>	<u>2</u>
<u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u>	
4. <u>Storage or treatment of different wastes in containers:</u>	

Modifications	Class
<p>a. <u>That require addition of units or change in treatment process or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards, or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) as contained in the most recent revised edition (July 1, 2003). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u></p>	11
<p>b. <u>That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u></p>	11
<p>G. <u>Tanks</u></p>	
<p>1.</p>	
<p>a. <u>Modification or addition of tank units resulting in greater than 25% increase in the facility's tank capacity, except as provided in G(1)(c), G(1)(d), and G(1)(e) below.</u></p>	3
<p>b. <u>Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in G(1)(d) and G(1)(e) below.</u></p>	2
<p>c. <u>Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation.</u></p>	2
<p>d. <u>After prior approval of the department, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation.</u></p>	11
<p>e. <u>Modification or addition of tank units or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) as contained in the most recent revised edition (July 1, 2003), with prior approval of the department. This modification may also involve addition of new waste codes. It is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u></p>	11
<p>2. <u>Modification of a tank unit or secondary containment system without increasing the capacity of the unit.</u></p>	2
<p>3. <u>Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided:</u></p>	1
<p>a. <u>The capacity difference is no more than 1,500 gallons;</u></p>	
<p>b. <u>The facility's permitted tank capacity is not increased; and</u></p>	

<u>Modifications</u>	<u>Class</u>
<ul style="list-style-type: none"> c. <u>The replacement tank meets the same conditions in the permit.</u> 	
4. <u>Modification of a tank management practice.</u>	<u>2</u>
5. <u>Management of different wastes in tanks:</u>	
<ul style="list-style-type: none"> a. <u>That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the permit, except as provided in G(5)(c) below.</u> 	<u>3</u>
<ul style="list-style-type: none"> b. <u>That do not require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process than authorized in the permit, except as provided in G(5)(d).</u> 	<u>2</u>
<ul style="list-style-type: none"> c. <u>That require addition of units or change in treatment processes or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) as contained in the most recent revised edition (July 1, 2003). The modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u> 	<u>11</u>
<ul style="list-style-type: none"> d. <u>That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u> 	<u>1</u>
<p><u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u></p>	
<p>H. <u>Surface Impoundments</u></p>	
1. <u>Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity.</u>	<u>3</u>
2. <u>Replacement of a surface impoundment unit.</u>	<u>3</u>
3. <u>Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system, or leachate collection system.</u>	<u>2</u>
4. <u>Modification of a surface impoundment management practice.</u>	<u>2</u>
5. <u>Treatment, storage, or disposal of different wastes in surface impoundments:</u>	
<ul style="list-style-type: none"> a. <u>That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.</u> 	<u>3</u>
<ul style="list-style-type: none"> b. <u>That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.</u> 	<u>2</u>

<u>Modifications</u>	<u>Class</u>
c. <u>That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) as contained in the most recent revised edition (July 1, 2003), and provided that the unit meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33.1-24-05-254. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u>	1
d. <u>That are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33.1-24-05-254, and provided further that the surface impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u>	1
6. <u>Modifications of unconstructed units to comply with subsection 3 of section 33.1-24-05-119, section 33.1-24-05-126, section 33.1-24-05-127, and subsection 4 of section 33.1-24-05-120.</u>	11
7. <u>Changes in response action plan:</u>	
a. <u>Increase in action leakage rate.</u>	3
b. <u>Change in a specific response reducing its frequency or effectiveness.</u>	3
c. <u>Other changes.</u>	2
<u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u>	
I. <u>Enclosed Waste Piles. For all waste piles except those complying with subsection 3 of section 33.1-24-05-130, modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with subsection 3 of section 33.1-24-05-130.</u>	
1. <u>Modification or addition of waste pile units:</u>	
a. <u>Resulting in greater than 25% increase in the facility's waste pile storage or treatment capacity.</u>	3
b. <u>Resulting in up to 25% increase in the facility's waste pile storage or treatment capacity.</u>	2
2. <u>Modification of waste pile unit without increasing the capacity of the unit.</u>	2
3. <u>Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting all waste pile conditions in the permit.</u>	1
4. <u>Modification of a waste pile management practice.</u>	2
5. <u>Storage or treatment of different wastes in waste piles:</u>	
a. <u>That require additional or different management practices or different design of the unit.</u>	3

<u>Modifications</u>	<u>Class</u>
<u>b. That do not require additional or different management practices or different design of the unit.</u>	<u>2</u>
<u>6. Conversion of an enclosed waste pile to a containment building unit.</u>	<u>2</u>
<u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u>	
<u>J. Landfills and Unenclosed Waste Piles</u>	
<u>1. Modification or addition of landfill units that result in increasing the facility's disposal capacity.</u>	<u>3</u>
<u>2. Replacement of a landfill.</u>	<u>3</u>
<u>3. Addition or modification of a liner, leachate collection system, leachate detection system, runoff control, or final cover system.</u>	<u>3</u>
<u>4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, runoff control, or final cover system.</u>	<u>2</u>
<u>5. Modification of a landfill management practice.</u>	<u>2</u>
<u>6. Landfill different wastes:</u>	
<u>a. That require additional or different management practices or different design of the liner, leachate collection system, or leachate detection system.</u>	<u>3</u>
<u>b. That do not require additional or different management practices or different design of the liner, leachate collection system, or leachate detection system.</u>	<u>2</u>
<u>c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in 40 CFR 268.8(a)(2)(ii) as contained in the most recent revised edition (July 1, 2003), and provided that the landfill unit meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33.1-24-05-254. This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u>	<u>1</u>
<u>d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in subdivision b of subsection 8 of section 33.1-24-05-254, and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, F021, F022, F023, F026, F027, and F028).</u>	<u>1</u>

<u>Modifications</u>	<u>Class</u>
7. <u>Modifications of unconstructed units to comply with subsection 3 of section 33.1-24-05-131, section 33.1-24-05-137, section 33.1-24-05-138, subsection 3 of section 33.1-24-05-132, subsection 3 of section 33.1-24-05-177, section 33.1-24-05-187, subsection 3 of section 33.1-24-05-178, and section 33.1-24-05-188.</u>	<u>11</u>
8. <u>Changes in response action plan:</u>	
a. <u>Increase in action leakage rate.</u>	<u>3</u>
b. <u>Change in a specific response reducing its frequency or effectiveness.</u>	<u>3</u>
c. <u>Other changes.</u>	<u>2</u>
<u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u>	
<u>K. Land Treatment</u>	
1. <u>Lateral expansion of or other modification of a land treatment unit to increase areal extent.</u>	<u>3</u>
2. <u>Modification of run-on control system.</u>	<u>2</u>
3. <u>Modify runoff control system.</u>	<u>3</u>
4. <u>Other modifications of land treatment unit component specifications or standards required in permit.</u>	<u>2</u>
5. <u>Management of different wastes in land treatment units:</u>	
a. <u>That require a change in permit operating conditions or unit design specifications.</u>	<u>3</u>
b. <u>That do not require a change in permit operating conditions or unit design specifications.</u>	<u>2</u>
<u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u>	
6. <u>Modification of a land treatment unit management practice to:</u>	
a. <u>Increase rate or change method of waste application.</u>	<u>3</u>
b. <u>Decrease rate of waste application.</u>	<u>1</u>
7. <u>Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions.</u>	<u>2</u>
8. <u>Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to modify operating plans for distribution of animal feeds resulting from such crops.</u>	<u>3</u>
9. <u>Modification of operating practice due to detection of releases from the land treatment unit pursuant to subdivision b of subsection 7 of section 33.1-24-05-165.</u>	<u>3</u>

Modifications	Class
10. <u>Changes in the unsaturated zone monitoring system, resulting in a change to the location, depth, number of sampling points, or which replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements.</u>	3
11. <u>Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or which replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements.</u>	2
12. <u>Changes in background values for hazardous constituents in soil and soil-pore liquid.</u>	2
13. <u>Changes in sampling, analysis, or statistical procedure.</u>	2
14. <u>Changes in land treatment demonstration program prior to or during the demonstration.</u>	2
15. <u>Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met, and the department's prior approval has been received.</u>	11
16. <u>Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the department.</u>	11
17. <u>Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration.</u>	3
18. <u>Changes in vegetative cover requirements for closure.</u>	2
L. <u>Incinerators, Boilers, and Industrial Furnaces:</u>	
1. <u>Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</u>	3
2. <u>Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</u>	2

Modifications	Class
<p>3. <u>Modification of an incinerator, boiler, or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove hydrogen chloride and chlorine metals, or particulate from the combustion gases, or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</u></p>	3
<p>4. <u>Modification of an incinerator, boiler, or industrial furnace unit in a manner that would not likely affect the capability of the unit to meet the regulatory performance standards but which would change the operating conditions or monitoring requirements specified in the permit. The department may require a new trial burn to demonstrate compliance with the regulatory performance standards.</u></p>	2
<p>5. <u>Operating requirements:</u></p> <p>a. <u>Modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</u></p> <p>b. <u>Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed cutoff procedures or controls.</u></p> <p>c. <u>Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit.</u></p>	3 2
<p>6. <u>Burning different wastes:</u></p> <p>a. <u>If the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The department will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.</u></p> <p>b. <u>If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit.</u></p>	3 2
<p><u>Note: See subsection 7 of section 33.1-24-06-14 for modification procedures to be used for the management of newly listed or identified wastes.</u></p>	
<p>7. <u>Shakedown and trial burn:</u></p>	

<u>Modifications</u>	<u>Class</u>
a. <u>Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn.</u>	<u>2</u>
b. <u>Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the department.</u>	<u>11</u>
c. <u>Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the department.</u>	<u>11</u>
d. <u>Changes in the ranges of the operating requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the department.</u>	<u>11</u>
8. <u>Substitution of an alternative type of nonhazardous waste fuel that is not specified in the permit.</u>	<u>1</u>
9. <u>Technology changes needed to meet standards under 40 CFR part 63 (subpart EEE--national emission standards for hazardous air pollutants from hazardous waste combustors), provide the procedures of subsection 10 of section 33.1-24-06-14 are followed.</u>	<u>11</u>
10. <u>Changes to hazardous waste permit provisions needed to support transition to 40 CFR part 63 (subpart EEE - national emission standards for hazardous air pollutants from hazardous waste combustors), provided the procedures of subsection 11 of section 33.1-24-06-14 are followed.</u>	<u>11</u>
<u>M. Containment Buildings</u>	
1. <u>Modification or addition of containment building units:</u>	
a. <u>Resulting in greater than 25% increase in the facility's containment building storage or treatment capacity.</u>	<u>3</u>
b. <u>Resulting in up to 25% increase in the facility's containment building storage or treatment capacity.</u>	<u>2</u>
2. <u>Modification of a containment building unit or secondary containment system without increasing the capacity of the unit.</u>	<u>2</u>
3. <u>Replacement of a containment building with a containment building that meets the same design standards provided:</u>	
a. <u>The unit capacity is not increased.</u>	<u>1</u>
b. <u>The replacement containment building meets the same conditions in the permit.</u>	<u>1</u>
4. <u>Modification of a containment building management practice.</u>	<u>2</u>
5. <u>Storage or treatment of different wastes in containment buildings:</u>	
a. <u>That require additional or different management practices.</u>	<u>3</u>
b. <u>That do not require additional or different management practices.</u>	<u>2</u>

<u>Modifications</u>		<u>Class</u>
<u>N.</u>	<u>Corrective Action</u>	
1.	<u>Approval of a corrective action management unit pursuant to section 33.1-24-05-552.</u>	<u>3</u>
2.	<u>Approval of a temporary unit or time extension for a temporary unit pursuant to section 33.1-24-05-553.</u>	<u>2</u>
3.	<u>Approval of a staging pile or staging pile operating term extension pursuant to section 33.1-24-05-554.</u>	<u>2</u>
<u>O.</u>	<u>Burden Reduction</u>	
1.	<u>Development of one contingency plan based on integrated contingency plan guidance pursuant to subsection 2 of section 33.1-24-05-27.</u>	<u>1</u>
2.	<u>Changes to recordkeeping and reporting requirements pursuant to subsection 9 of section 33.1-24-05-31 and subsection 7 of section 33.1-24-05-57.</u>	<u>1</u>
3.	<u>Changes to inspection frequency for tank systems pursuant to subsection 2 of section 33.1-24-05-108.</u>	<u>1</u>
4.	<u>Changes to detection and compliance monitoring program pursuant to subsection 4 of section 33.1-24-05-55, subdivisions b and c of subsection 7 of section 33.1-24-05-55, and subsections 6 and 7 of section 33.1-24-05-56.</u>	<u>1</u>

FOOTNOTE: ¹Class 1 modifications requiring prior department approval.

CHAPTER 33.1-24-07
PERMITTING PROCEDURES

Section

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<u>33.1-24-07-32</u>	<u>[Reserved]</u>
<u>33.1-24-07-33</u>	<u>[Reserved]</u>
<u>33.1-24-07-34</u>	<u>[Reserved]</u>
<u>33.1-24-07-35</u>	<u>[Reserved]</u>
<u>33.1-24-07-36</u>	<u>[Reserved]</u>
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<u>33.1-24-07-40</u>	<u>Standardized Permit</u>
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- 33.1-24-07-52 Routine Changes
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- 33.1-24-07-54 Significant Changes

33.1-24-07-01. Purpose and scope.

This chapter contains procedures for issuing, modifying, revoking and reissuing, or terminating all permits, other than "emergency permits" (see section 33.1-24-06-19) and "permits by rule" (see section 33.1-24-06-18). The latter kinds of permits are governed by chapter 33.1-24-06. Operating status prior to final administrative approval of the permit application is not a "permit" and is covered by specific provisions in chapter 33.1-24-06. The procedures of this chapter also apply to denial of a permit for the active life of a hazardous waste management facility or unit under subsection 2 of section 33.1-24-06-13.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-02. Application for a permit.

1. General requirements.

- a. Any person who requires a hazardous waste permit shall complete, sign, and submit to the department an application in accordance with chapter 33.1-24-06.
- b. The department shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. (See section 33.1-24-06-01.)
- c. Permit applications must comply with the signature and certification requirements of section 33.1-24-06-03.

2. The department shall review for completeness every application for a hazardous waste permit. Each application for a permit submitted by a new hazardous waste management facility should be reviewed for completeness by the department within thirty days of its receipt. Each application for a permit submitted by an existing hazardous waste management facility (both parts A and B of the application) should be reviewed for completeness within sixty days of receipt. Upon completing the review, the department shall notify the applicant in writing whether the application is complete. If the application is incomplete, the department shall list the information necessary to make the application complete. When the application is for an existing hazardous waste management facility, the department shall specify in the notice of deficiency a date for submitting the necessary information. The department shall notify the applicant that the application is complete upon receiving this information. After the application is completed, the department may request additional information from an applicant, but only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete.

3. If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provisions.
4. If the department decides that a site visit is necessary for any reason in conjunction with the processing of an application, the department shall notify the applicant and a date shall be scheduled.
5. The effective date of an application is the date on which the department notifies the applicant that the application is complete as provided in subsection 2.
6. For each application from a major new hazardous waste management facility, the department shall, no later than the effective date of the application, prepare and mail to the applicant a project decision schedule. The schedule must specify target dates by which the department intends to:
 - a. Prepare a draft permit;
 - b. Give public notice;
 - c. Complete the public comment period, including any public hearings; and
 - d. Issue a final permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-03. Modification, revocation and reissuance, or termination of permits.

1. Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the department's initiative. However, permits may only be modified, revoked and reissued, or terminated by the department for the reasons specified in section 33.1-24-06-12 or 33.1-24-06-13. All requests shall be in writing and shall contain facts or reasons supporting the request.
2. If the department decides the request is not justified, the department shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comments, or hearings. Denials by the department may be informally appealed to the department by letter briefly setting forth the relevant facts. The department may then begin modification, revocation and reissuance, or termination proceedings under subsection 3. The appeal shall be considered denied if the department takes no action on the letter within sixty days after receiving it.
3. Requirements to modify or revoke.
 - a. If the department tentatively decides to modify or revoke and reissue a permit under section 33.1-24-06-12 (other than subdivision c of subsection 2 of section 33.1-24-06-12) or subsection 3 of section 33.1-24-06-14, the department shall prepare a draft permit under section 33.1-24-07-04 incorporating the proposed changes. The department may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, other than under subdivision c of subsection 2 of

section 33.1-24-06-12, the department shall require the submission of a new application. In the case of revoked and reissued permits under subdivision c of subsection 2 of section 33.1-24-06-12, the department and the permittee shall comply with the appropriate requirements in sections 22-24-07-40 through 33.1-24-07-54 for hazardous waste standardized permits.

b. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

c. "Class 1 and 2 modifications" as defined in section 33.1-24-06-14 are not subject to the requirements of this section.

4. If the department tentatively decides to terminate a permit under section 33.1-24-06-13, the department shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under section 33.1-24-07-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-04. Draft permits.

1. Once an application is complete, the department shall tentatively decide whether to prepare a draft permit or to deny the application.

2. If the department tentatively decides to deny the permit application, the department shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. (See subsection 4.) If the department's final decision is that the tentative decision to deny the permit application was incorrect, the department shall withdraw the notice of intent to deny and proceed to prepare a draft permit under subsection 3.

3. If the department decides to prepare a draft permit, the department shall prepare a draft permit that contains the following information:

a. All conditions under sections 33.1-24-06-04 and 33.1-24-06-05.

b. All compliance schedules under section 33.1-24-06-07.

c. All monitoring requirements under section 33.1-24-06-08.

d. Standards for treatment, storage, and disposal and other permit conditions under section 33.1-24-06-04.

4. All draft permits prepared under this section shall be accompanied by a fact sheet (section 33.1-24-07-05), publicly noticed (section 33.1-24-07-06), and shall be made available for public comment (section 33.1-24-07-07). The department shall give notice of opportunity for a public hearing (section 33.1-24-07-08), issue a final decision (section

33.1-24-07-11) and respond to comments (section 33.1-24-07-13). An appeal may be taken under section 33.1-24-07-14.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-05. Fact sheet.

1. A fact sheet must be prepared for every draft permit for a major hazardous waste management facility or activity, and for every draft permit which the department finds is the subject of widespread public interest or raises major issues. The fact sheet must briefly set forth the principle facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. The department shall send this fact sheet to the applicant and, on request, to any other person.
2. The fact sheet must include, when applicable:
 - a. A brief description of the type of facility or activity which is the subject of the draft permit;
 - b. The type and quantity of wastes, fluids, or pollutants which are proposed to be, or are being treated, stored, disposed of, injected, emitted, or discharged;
 - c. A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions;
 - d. Reasons why any requested variances or alternatives to required standards do or do not appear justified;
 - e. A description of the procedures for reaching a final decision on the draft permit including:
 - (1) The beginning and ending dates of the comment period under section 33.1-24-07-06 and the address where comments will be received;
 - (2) Procedures for requesting a hearing and the nature of that hearing;
 - (3) Any other procedures by which the public may participate in the final decision; and
 - f. Name and telephone number of a person to contact for additional information.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-06. Public notice of permit actions and public comment period.

1. Scope.

- a. The department shall give public notice that the following actions have occurred:
 - (1) A permit application has been tentatively denied under subsection 2 of section 33.1-24-07-04.

(2) A draft permit has been prepared under subsection 3 of section 33.1-24-07-04.

(3) A hearing has been scheduled under section 33.1-24-07-08.

(4) An appeal has been granted under subsection 3 of section 33.1-24-07-14.

b. No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under subsection 2 of section 33.1-24-07-03. Written notice of that denial must be given to the requester and to the permittee.

c. Public notices may describe more than one permit or permit action.

2. Timing.

a. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under subsection 1 must allow at least forty-five days for public comment.

b. Public notice of a public hearing must be given at least thirty days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

3. Methods. Public notice of activities described in subdivision a of subsection 1 must be given by the following methods:

a. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this subsection may waive that person's rights to receive notice for any classes and categories of permits):

(1) The applicant.

(2) Any other agency which the department knows has issued or is required to issue permits for the same facility or activity, including the environmental protection agency.

(3) Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources, the advisory council on historic preservation, state historic preservation officers, and other appropriate government authorities, including other affected states.

(4) Persons on a mailing list developed by:

(a) Including those who request in writing to be on the list;

(b) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

(c) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as regional and state-funded newsletters, environmental bulletins, or state law journals. (The department may update the mailing list from time to time by requesting written indication of continued interest from those listed. The department may delete from the list the name of any person who fails to respond to such a request.)

- (5) To any unit of local government having jurisdiction over the area where the facility is proposed to be located.
- (6) To each state agency having any authority under state law with respect to construction or operation of such facility.
- b. This notice must comply with subsection 6 of North Dakota Century Code section 23.1-04-08 and must be in a manner constituting legal notice to the public under state law.
- c. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other form or medium to elicit public participation.

4. Contents.

- a. All public notices. All public notices issued under this chapter must contain the following minimum information:
 - (1) Name and address of the office processing the permit action for which notice is being given.
 - (2) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit.
 - (3) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit.
 - (4) Name, address, and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, fact sheet, and the application.
 - (5) A brief description of the comment procedures required by sections 33.1-24-07-07 and 33.1-24-07-08 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.
 - (6) Any additional information considered necessary or proper.
 - b. Public notices for hearings. In addition to the general public notice described in subdivision a, the public notice of a hearing under section 33.1-24-07-08 must contain the following information:
 - (1) Reference to the date of previous public notices relating to the permit.
 - (2) Date, time, and place of the hearing.
 - (3) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.
5. **Distribution of copies.** In addition to the general public notice described in subdivision a of subsection 4, all persons identified in paragraphs 1, 2, and 3 of subdivision a of

subsection 3 must be mailed a copy of the fact sheet, the permit application (if any), and the draft permit (if any).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-07. Public comments and requests for public hearings.

During the public comment period provided under section 33.1-24-07-06, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled.

A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised in the hearing. All comments must be considered in making the final decision and must be answered as provided in section 33.1-24-07-13.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-08. Public hearings.

1. The department shall hold a public hearing:

a. Whenever the department finds, on the basis of requests, a significant degree of public interest in a draft permit;

b. At the department's discretion, whenever for instance, such a hearing might clarify one or more issues involved in the permit decision; or

c. Whenever the department receives written notice of opposition to a draft permit and a request for a hearing within forty-five days of public notice under subdivision a of subsection 2 of section 33.1-24-07-06.

2. Whenever possible, the department shall schedule a hearing under this section at a location convenient to the nearest population center to the proposed facility.

3. Public notice of the hearing shall be given as specified in section 33.1-24-07-06.

4. Whenever a public hearing will be held, the department shall designate a presiding officer for the hearing who shall be responsible for its scheduling and orderly conduct.

5. Any person may submit oral or written statements and data concerning a draft permit. Reasonable limits may be set upon the time allowed for oral statements and the submission of statements in writing may be required. The public comment period under section 33.1-24-07-06 must automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.

6. A tape recording or written transcript of the hearing must be made available to the public.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-09. Obligation to raise issues and provide information during the public comment period.

All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the department's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, shall raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period (including any public hearing) under section 33.1-24-07-06. All supporting materials must be included in full and may not be incorporated by reference, unless they consist of state or federal statutes or regulations, or other generally available reference materials. Commenters shall make supporting material available to the department. (A comment period longer than thirty days will often be necessary in complicated proceedings to give commenters a reasonable opportunity to comply with the requirements of this section. Commenters may request longer comment periods and they should be freely established under section 33.1-24-07-06 to the extent that they appear necessary.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-10. Reopening of the public comment period.

1. If any data, information, or arguments submitted during the public comment period, including information or arguments required under section 33.1-24-07-09, appear to raise substantial new questions concerning a permit, the department may take one or more of the following actions:

a. Prepare a new draft permit, appropriately modified, under section 33.1-24-07-04.

b. Prepare a revised fact sheet under section 33.1-24-07-05 and reopen the comment period under section 33.1-24-07-10.

c. Reopen or extend the comment period under section 33.1-24-07-06 to give interested persons an opportunity to comment on the information or arguments submitted.

2. Comments filed during the reopened comment period must be limited to the substantial new questions that caused its reopening. The public notice under section 33.1-24-07-06 defines the scope of the reopening.

3. Public notice of any of the above actions must be issued under section 33.1-24-07-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-11. Issuance and effective date of permit.

1. After the close of the public comment period under section 33.1-24-07-06 on a draft permit, the department shall issue a final permit decision (or a decision to deny a permit for the active life of a hazardous waste management facility or unit under subsection 2 of section 33.1-24-06-13). The department shall notify the applicant and each person

who has submitted written comments or requested notice of the final permit decision. This notice must include reference to the procedures for appealing a decision on a permit or a decision to terminate a permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

2. A final permit decision (or a decision to deny a permit for the active life of a hazardous waste management facility or unit under subsection 2 of section 33.1-24-06-13) shall become effective thirty days after the service of notice of the decision under subsection 1, unless:

a. A later effective date is specified in the decision;

b. Review is requested under section 33.1-24-07-14; or

c. No comments required a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-12. Stays of contested permit conditions.

1. Stays.

a. If a request for review of a permit under section 33.1-24-07-14 is granted, the effect of the contested permit conditions is stayed and is not subject to judicial review pending final department action. If the permit involves a new facility, the applicant is without a permit for the proposed new facility pending final agency action.

b. Uncontested conditions which are not severable from those contested must be stayed together with the contested conditions. Stayed provisions of permits for existing facilities must be identified by the department. All other provisions of the permit for the existing facility remain fully effective and enforceable.

2. Stays based on cross effects. A stay may be granted based on the grounds that an appeal to the department under section 33.1-24-07-14 of one permit may result in changes to another permit only when each of the permits involved has been appealed to the department and the department has accepted each appeal.

3. Any facility or activity holding an existing permit shall:

a. Comply with the conditions of that permit during any modification or revocation and reissuance proceedings under section 33.1-24-07-03; and

b. To the extent conditions of any new permit are stayed under this section, comply with the conditions of the existing permit which corresponds to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-13. Response to comments.

1. At the time that a final permit is issued under section 33.1-24-07-11, the department shall issue a response to comments. This response must:
 - a. Specify which provisions, if any, of the draft permits have been changed in the final permit decision, and the reasons for the change; and
 - b. Briefly describe and respond to all significant comments on the draft permit raised during the public comment period or during any hearing.
2. The response to comments must be available to the public.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-14. Appeal of permit.

1. Within thirty days after a final permit decision (or a decision under subsection 2 of section 33.1-24-06-13 to deny a permit for the active life of a hazardous waste management facility or unit) has been issued under section 33.1-24-07-11, any person who filed comments on that draft permit or participated in the public hearing may petition the department to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. The thirty-day period within which a person may request review under this section begins with the service of notice of the department's action unless a later date is specified in that notice. The petition must include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these rules and, when appropriate, a showing that the condition in question is based on.
 - a. A finding of fact or conclusion of law which is clearly erroneous; or
 - b. An exercise of discretion or an important policy consideration which the department should, in the department's discretion, review.
2. The department may also decide on the department's initiative to review any condition of any permit issued under this article. The department must act under this section within thirty days of the service date of notice of the department's action.
3. Within a reasonable time following the filing of the petition for review, the department shall issue an order either granting or denying the petition for review. To the extent review is denied, the conditions of the final permit decision become final department action. Public notice of any grant of review by the department under subsection 1 or 2 must be given as provided in section 33.1-24-07-06. Public notice must set forth a briefing schedule for the appeal and must state that any interested person may file an amicus brief. A notice of denial of review may be sent only to the person requesting review.

4. Final department action occurs when a final permit is issued or denied by the department and the department review procedures are exhausted. A final permit decision must be issued by the department:

a. When the department issues notice to the parties that review has been denied.

b. When the department issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings; or upon the completion of remand proceedings if the proceedings are remanded, unless the department remand order specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-15. [Reserved]

33.1-24-07-16. [Reserved]

33.1-24-07-17. [Reserved]

33.1-24-07-18. [Reserved]

33.1-24-07-19. [Reserved]

33.1-24-07-20. [Reserved]

33.1-24-07-21. [Reserved]

33.1-24-07-22. [Reserved]

33.1-24-07-23. [Reserved]

33.1-24-07-24. [Reserved]

33.1-24-07-25. Preapplication public meeting and notice.

1. Applicability. The requirements of this section apply to all hazardous waste part B applications seeking initial permits for hazardous waste management units. The requirements of this section also apply to hazardous waste part B applications seeking renewal of permits for such units, where the renewal application is proposing a significant change in facility operations. For the purposes of this section, a "significant change" is any change that would qualify as a class 3 permit modification under section 33.1-24-06-14. The requirements of this section also apply to hazardous waste management facilities for which facility owners or operators are seeking coverage under a hazardous waste standardized permit (see sections 33.1-24-06-45 through 33.1-24-06-85), including renewal of a standardized permit for such units, where the renewal is proposing a significant change in facility operations, as defined at subsection 3 of section 33.1-24-07-51. The requirements of this section do not apply to permit modifications under section 33.1-24-06-14 or to applications that are submitted for the sole purpose of conducting postclosure activities or postclosure activities and corrective action at a facility.

2. Prior to the submission of a part B hazardous waste permit application for a facility, or to the submission of a written notice of intent to be covered by a hazardous waste standardized permit (see sections 33.1-24-06-45 through 33.1-24-06-85), the applicant must hold at least one meeting with the public in order to solicit questions from the community and inform the community of proposed hazardous waste management activities. The applicant shall post a sign-in sheet or otherwise provide a voluntary opportunity for attendees to provide their names and addresses.

3. The applicant shall submit a summary of the meeting, along with the list of attendees and their addresses developed under subsection 2, and copies of any written comments or materials submitted at the meeting, to the department as a part of the part B application, in accordance with subsection 2 of section 33.1-24-06-17, or with the written notice of intent to be covered by a hazardous waste standardized permit (see sections 33.1-24-06-45 through 33.1-24-06-85).

4. The applicant shall provide public notice of the preapplication meeting at least thirty days prior to the meeting. The applicant shall maintain, and provide to the department upon request, documentation of the notice.

a. The applicant shall provide public notice in all of the following forms:

(1) A newspaper advertisement. The applicant shall publish a notice, fulfilling the requirements in subdivision b, in a newspaper of general circulation in the county or equivalent jurisdiction that hosts the proposed location of the facility. In addition, the department shall instruct the applicant to publish the notice in newspapers of general circulation in adjacent counties or equivalent jurisdictions, where the department determines that such publication is necessary to inform the affected public. The notice must be published as a display advertisement.

(2) A visible and accessible sign. The applicant shall post a notice on a clearly marked sign at or near the facility, fulfilling the requirements in subdivision b. If the applicant places the sign on the facility property, then the sign must be large enough to be readable from the nearest point where the public would pass by the site.

(3) A broadcast media announcement. The applicant shall broadcast a notice, fulfilling the requirements in subdivision b, at least once on at least one local radio station or television station. The applicant may employ another medium with prior approval of the department.

(4) A notice to the department. The applicant shall send a copy of the newspaper notice to the department and to the appropriate units of state and local government, in accordance with subdivision b of subsection 3 of section 33.1-24-07-06.

b. The notices required under subdivision a must include:

(1) The date, time, and location of the meeting;

(2) A brief description of the purpose of the meeting;

- (3) A brief description of the facility and proposed operations, including the address or a map (for example, a sketched or copied street map) of the facility location;
- (4) A statement encouraging people to contact the facility at least seventy-two hours before the meeting if they need special access to participate in the meeting; and
- (5) The name, address, and telephone number of a contact person for the applicant.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-26. Public notice requirements at the application stage.

1. Applicability. The requirements of this section apply to all hazardous waste part B applications seeking initial permits for hazardous waste management units. The requirements of this section also apply to hazardous waste part B applications seeking renewal of permits for such units under section 33.1-24-06-02. The requirements of this section do not apply to hazardous waste units for which facility owners or operators are seeking coverage under a hazardous waste standardized permit (see sections 33.1-24-06-45 through 33.1-24-06-85). The requirements of this section also do not apply to permit modifications under section 33.1-24-06-14 or permit applications submitted for the sole purpose of conducting postclosure activities or postclosure activities and corrective action at a facility.

2. Notification at application submittal.

a. The department shall provide public notice as set forth in paragraph 4 of subdivision a of subsection 3 of section 33.1-24-07-06, and notice to appropriate units of state and local government as set forth in subdivision b of subsection 3 of section 33.1-24-07-06, that a part B permit application has been submitted to the department and is available for review.

b. The notice must be published within a reasonable period of time after the application is received by the department. The notice must include:

- (1) The name and telephone number of the applicant's contact person;
- (2) The name and telephone number of the department's contact office, and a mailing address to which information, opinions, and inquiries may be directed throughout the permit review process;
- (3) An address to which people can write in order to be put on the facility mailing list;
- (4) The location where copies of the permit application and any supporting documents can be viewed and copied;
- (5) A brief description of the facility and proposed operations, including the address or a map (for example, a sketched or copied street map) of the facility location on the front page of the notice; and

(6) The date that the application was submitted.

3. Concurrent with the notice required under subsection 2, the department must place the permit application and any supporting documents in a location accessible to the public in the vicinity of the facility or at the department's office.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-27. Information repository.

1. Applicability. The requirements of this section apply to all applications seeking hazardous waste permits for hazardous waste management units.
2. The department may assess the need, on a case-by-case basis, for an information repository. When assessing the need for an information repository, the department shall consider a variety of factors, including the level of public interest; the type of facility; the presence of an existing repository; and the proximity to the nearest copy of the administrative record. If the department determines, at any time after submittal of a permit application, that there is a need for a repository, then the department shall notify the facility that it must establish and maintain an information repository. (See subsection 13 of section 33.1-24-06-04 for similar provisions relating to the information repository during the life of a permit.)
3. The information repository shall contain all documents, reports, data, and information deemed necessary by the department to fulfill the purposes for which the repository is established. The department may limit the contents of the repository.
4. The information repository must be located and maintained at a site chosen by the facility. If the department finds the site unsuitable for the purposes and persons for which it was established, due to problems with the location, hours of availability, access, or other relevant considerations, then the department shall specify a more appropriate site.
5. The department shall specify requirements for informing the public about the information repository. At a minimum, the department shall require the facility to provide a written notice about the information repository to all individuals on the facility mailing list.
6. The facility owner or operator shall be responsible for maintaining and updating the repository with appropriate information throughout a time period specified by the department. The department may close the repository at its discretion, based on the factors in subsection 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-28. [Reserved].

33.1-24-07-29. [Reserved].

33.1-24-07-30. [Reserved].

33.1-24-07-31. [Reserved].

33.1-24-07-32. [Reserved].

33.1-24-07-33. [Reserved].

33.1-24-07-34. [Reserved].

33.1-24-07-35. [Reserved].

33.1-24-07-36. [Reserved].

33.1-24-07-37. [Reserved].

33.1-24-07-38. [Reserved].

33.1-24-07-39. [Reserved].

33.1-24-07-40. Standardized permit.

The standardized permit is a special form of hazardous waste permit which may consist of two parts: A uniform portion that the department issues in all cases, and a supplemental portion that the department issues at the department's discretion. Standardized permit is defined in section 33.1-24-01-04.

1. The uniform portion of a standardized permit consists of terms and conditions, relevant to the unit or units operating at the facility, contained in sections 33.1-24-05-950 through 33.1-24-05-1149. If the owner or operator intends to operate under the standardized permit, the owner or operator shall comply with these applicable terms and conditions.
2. The supplemental portion of a standardized permit consists of site specific terms and conditions, beyond those of the uniform portion, which the department may impose on the facility, as necessary to protect human health and the environment. If the department issues a supplemental portion, the owner or operator shall comply with the site specific terms and conditions the department imposes.
 - a. When required under section 33.1-24-05-1031, provisions to implement corrective action will be included in the supplemental portion.
 - b. Unless otherwise specified, these supplemental permit terms and conditions apply to the facility in addition to the terms and conditions of the uniform portion of the standardized permit and not in place of any of those terms and conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-41. Eligibility for a standardized permit.

1. The owner or operator may be eligible for a standardized permit if the facility:
 - a. Generates hazardous waste and then stores or nonthermally treats the hazardous waste on site in containers, tanks, or containment buildings; or
 - b. Receives hazardous waste generated offsite by a generator under the same ownership as the receiving facility, and then stores or nonthermally treats the hazardous waste in containers, tanks, or containment buildings.

c. The department will inform the owner or operator of eligibility when a decision is made on the facility permit.

2. [Reserved]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-42. Applying for a standardized permit.

1. The owner or operator shall follow the requirements in sections 33.1-24-07-40 through 33.1-24-07-54, section 33.1-24-07-25, section 33.1-24-06-01 and sections 33.1-24-06-45 through 33.1-24-06-85.

2. The owner or operator shall submit to the department a written notice of intent to operate under the standardized permit and shall include the information and certifications required under sections 33.1-24-06-45 through 33.1-24-06-85.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-43. Switching from a hazardous waste permit to a standardized permit.

If all units in the hazardous waste permit are eligible for the standardized permit, the permittee may request the individual permit be revoked and reissued as a standardized permit, in accordance with section 33.1-24-07-03. If only some of the units in the hazardous waste permit are eligible for the standardized permit, the permittee may request the individual permit be modified to no longer include those units and issue a standardized permit for those units in accordance with section 33.1-24-07-44.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-44. Draft standardized permit.

1. The department shall:

a. Review the notice of intent and supporting information submitted by the facility owner or operator.

b. Determine whether the facility is or is not eligible to operate under the standardized permit.

(1) If the facility is eligible for the standardized permit, the department shall propose terms and conditions, if any, to include in a supplemental portion. If the department determines these terms and conditions are necessary to protect human health and the environment and cannot be imposed, the department tentatively shall deny coverage under the standardized permit.

(2) If the facility is not eligible for the standardized permit, the department tentatively shall deny coverage under the standardized permit. Cause for ineligibility may include the following:

(a) Failure of the facility owner or operator to submit all the information required under section 33.1-24-06-57.

(b) Information submitted that is required under section 33.1-24-06-57 is determined to be inadequate.

(c) Facility does not meet the eligibility requirements (activities are outside the scope of the standardized permit).

(d) Demonstrated history of significant noncompliance with applicable requirements.

(e) Permit conditions cannot ensure protection of human health and the environment.

c. Prepare a draft permit decision within one hundred twenty days after receiving the notice of intent and supporting documents from a facility owner or operator. A tentative determination under this section to deny or grant coverage under the standardized permit, including any proposed site specific conditions in a supplemental portion, constitutes a draft permit decision. A one time extension of thirty days to prepare the draft permit decision is allowed. When the use of the thirty-day extension is anticipated, the department should inform the permit applicant during the initial one-hundred-twenty-day review period. Reasons for an extension may include needing to complete review of submissions with the notice of intent (for example, closure plans, waste analysis plans, for facilities seeking to manage hazardous waste generated offsite).

2. The draft permit decision must be accompanied by a fact sheet. In preparing the draft permit decision, the following provisions apply:

a. Section 33.1-24-07-01.

b. Subsections 1 and 4 of Section 33.1-24-07-02.

c. Section 33.1-24-07-05; however, in the context of the standardized permit, the reference to the public comment period is section 33.1-24-07-48 instead of section 33.1-24-07-06.

d. Paragraphs 4 and 5 of subdivision a of subsection 3 of section 33.1-24-07-06, sections 33.1-24-07-47 through 33.1-24-07-49.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-45. Final standardized permit.

The department shall consider all comments received during the public comment period in making a final permit decision. In preparing a final permit decision, the following provisions apply:

1. Section 33.1-24-07-01.
2. Section 33.1-24-07-48.
3. Subsections 4, 5 and 6 of section 33.1-24-07-08.
4. Section 33.1-24-07-09; however, in the context of the standardized permit, the reference to the public comment period is section 33.1-24-07-48 instead of section 33.1-24-07-06.
5. Section 33.1-24-07-10; however, in the context of the standardized permit, use the following reference: in subdivision a of subsection 1 of section 33.1-24-07-10 use reference to section 33.1-24-07-44 instead of section 33.1-24-07-04; in subdivision c of subsection 1 of section 33.1-24-07-10 use reference to section 33.1-24-07-48 instead of section 33.1-24-07-06; in subsection 2 of section 33.1-24-07-10 use reference to section 33.1-24-07-47 instead of section 33.1-24-07-06.
6. Section 33.1-24-07-11; however, in the context of the standardized permit, the reference to the public comment period is section 33.1-24-07-48 instead of section 33.1-24-07-06.
7. Section 33.1-24-07-12.
8. Section 33.1-24-07-49.
9. Section 33.1-24-07-14.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-46. Situations requiring an application for an individual permit.

1. Cases where the department may determine a facility is not eligible for the standardized permit include the following:
 - a. The facility does not meet the criteria in section 33.1-24-07-41.
 - b. The facility has a demonstrated history of significant noncompliance with rules, regulations or permit conditions.
 - c. The facility has a demonstrated history of submitting incomplete or deficient permit application information.
 - d. The facility has submitted incomplete or inadequate materials with the notice of intent.
2. If the department determines a facility is not eligible for the standardized permit, the department shall inform the facility owner or operator that the facility owner or operator must apply for an individual hazardous waste permit.
3. The department may require any facility that has a standardized permit to apply for and obtain an individual hazardous waste permit. Any interested person may petition the department to take action under this subsection. Cases where the department may require an individual hazardous waste permit include the following:

- a. The facility is not in compliance with the terms and conditions of the standardized permit.
 - b. Circumstances have changed since the time the facility owner or operator applied for the standardized permit, so that the facility's hazardous waste management practices are no longer appropriately controlled under the standardized permit.
4. The department may require any facility authorized by a standardized permit to apply for an individual hazardous waste permit only if the department has notified the facility owner or operator in writing that an individual permit application is required. The notice must include a brief statement of the reasons for the department's decision, a statement setting a deadline for the owner or operator to file the application, and a statement that, on the effective date of the individual hazardous waste permit, the facility's standardized permit automatically terminates. Additional time may be granted upon request from the facility owner or operator.
5. Issuance of an individual hazardous waste permit to an owner or operator otherwise subject to a standardized permit, the standardized permit for the facility will automatically cease to apply on the effective date of the individual permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-47. Public notice of permit actions and public involvement.

1. The department shall provide public notice of the department's draft permit decision and shall provide an opportunity for the public to submit comments and request a hearing on that decision. The public notice must be provided to:
- a. The applicant;
 - b. Any other agency that the department knows has issued or is required to issue a hazardous waste permit for the same facility or activity, including the environmental protection agency;
 - c. Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the advisory council on historic preservation, state historic preservation officers, including any affected states;
 - d. To everyone on the facility mailing list developed according to the requirements in paragraph 4 of subdivision a of subsection 3 of section 33.1-24-07-06; and
 - e. To any units of local government having jurisdiction over the area where the facility is proposed to be located and to each state agency having any authority under state law with respect to the construction or operation of the facility.
2. The public notice must be issued according to the following methods:
- a. Publication in a daily or weekly major local newspaper of general circulation and broadcast over local radio stations;

- b. In a manner constituting legal notice to the public under state law and must comply with subsection 6 of North Dakota Century Code section 23.1-04-08; and
 - c. Any other method reasonably calculated to give actual notice of the draft permit decision to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.
3. The following information must be included in the public notice:
- a. The name and telephone number of the contact person at the facility.
 - b. The name and telephone number of the office processing the permit action, and a mailing address to which people may direct comments, information, opinions, or inquiries.
 - c. An address to which people may write to be put on the facility mailing list.
 - d. The location where people may view and make copies of the draft standardized permit and the notice of intent and supporting documents.
 - e. A brief description of the facility and proposed operations, including the address or a map (for example, a sketched or copied street map) of the facility location on the front page of the notice.
 - f. The date that the facility owner or operator submitted the notice of intent and supporting documents.
4. At the same time that the public notice is issued under this section, the draft standardized permit (including both the uniform portion and the supplemental portion, if any), the notice of intent and supporting documents, and the fact sheet must be placed in a location accessible to the public in the vicinity of the facility or at the department's office.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-48. Public comment and request for public hearings.

- 1. The public notice issued under section 33.1-24-07-47 must allow at least a forty-five day public comment period for people to submit written comments on the draft permit decision. The public comment period is automatically extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.
- 2. During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing. A request for a public hearing must be in writing and must state the nature of the issues proposed to be raised in the hearing.
- 3. The department shall hold a public hearing whenever it receives a written notice of opposition to a standardized permit and a request for a hearing within the public comment period under subsection 1. The department also may hold a public hearing at the department's discretion whenever such a hearing might clarify one or more issues involved in the permit decision.

4. Whenever possible, the department shall schedule a hearing under this section at a location convenient to the nearest population center to the facility. The department shall give public notice of the hearing at least thirty days before the date set for the hearing.
5. The department shall give public notice of the hearing according to the methods in subsections 1 and 2 of section 33.1-24-07-47. The hearing must be conducted according to the procedures in subsections 4, 5 and 6 of section 33.1-24-07-08.
6. In their written comments and during the public hearing, if held, interested parties may provide comments on the draft permit decision. These comments may include the facility's eligibility for the standardized permit, the tentative supplemental conditions proposed, and the need for additional supplemental conditions.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-49. Response to comments.

1. At the time a final standardized permit is issued, the department shall respond to comments received during the public comment period on the draft permit. This response must:
 - a. Specify which additional conditions (for example, those in the supplemental portion), if any, have been changed in the final permit, and the reasons for the change.
 - b. Briefly describe and respond to all significant comments on the facility's ability to meet the general requirements (for example, those terms and conditions in the uniform portion) and on any additional conditions necessary to protect human health and the environment raised during the public comment period or during the hearing.
 - c. Make the comments and responses accessible to the public.
2. The department may request additional information from the facility owner or operator or inspect the facility if additional information is needed to adequately respond to significant comments or to make decisions about conditions that may need to be added to the supplemental portion of the standardized permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-50. Appeal of permit.

Any person may petition for administrative review of the department's final permit decision, including the decision that the facility is eligible for the standardized permit, according to the procedures of section 33.1-24-07-14. However, the terms and conditions of the uniform portion of the standardized permit are not subject to administrative review under this provision.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-51. Permit changes at the request of the permittee.

The permittee may make both routine changes, routine changes with prior department approval, and significant changes. For the purposes of this section:

1. "Routine changes" are any changes to the standardized permit that qualify as a class 1 permit modification (without prior department approval) under section 33.1-24-06-14, appendix I;
2. "Routine changes with prior department approval" are for those changes to the standardized permit that would qualify as a class 1 modification with prior department approval, or a class 2 permit modification under section 33.1-24-06-14, appendix I; and
3. "Significant changes" are any changes to the standardized permit which:
 - a. Qualify as a class 3 permit modification under section 33.1-24-06-14, appendix I;
 - b. Are not explicitly identified in section 33.1-24-06-14, appendix I; or
 - c. Amend any terms or conditions in the supplemental portion of the standardized permit.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-52. Routine changes.

1. The permittee may make routine changes to the standardized permit without obtaining approval from the department. However, the permittee first must determine whether the routine change will amend the information submitted under section 33.1-24-06-57 with the notice of intent to operate under the standardized permit.
2. If the routine changes will amend the information submitted under section 33.1-24-06-57 with the notice of intent to operate under the standardized permit, then before making the routine changes the permittee must:
 - a. Submit to the department the revised information pursuant to subdivision a of subsection 1 of section 33.1-24-06-57; and
 - b. Provide notice of the changes to the facility mailing list and to state and local governments in accordance with the procedures in paragraphs 4 through 6 of subdivision a of subsection 3 of section 33.1-24-07-06.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-53. Routine changes with prior approval.

1. Routine changes to the standardized permit with prior department approval may only be made with the prior written approval of the department.

2. The permittee also must follow the procedures in subdivisions a and b of subsection 2 of section 33.1-24-07-52.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

33.1-24-07-54. Significant changes.

1. The permittee shall first provide notice of and conduct a public meeting.
 - a. Public meeting. The permittee shall hold a meeting with the public to solicit questions from the community and inform the community of the permittee's proposed modifications to the permittee's hazardous waste management activities. The permittee must post a sign in sheet or otherwise provide a voluntary opportunity for people attending the meeting to provide their names and addresses.
 - b. Public Notice. At least thirty days before planning to hold the meeting, the permittee shall issue a public notice in accordance with the requirements of subsection 4 of section 33.1-24-07-25.
2. After holding the public meeting, the permittee shall submit a modification request to the department that:
 - a. Describes the exact change or changes and whether they are changes to information provided under section 33.1-24-06-57 or to terms and conditions in the supplemental portion of the standardized permit;
 - b. Explain why the modification is needed; and
 - c. Includes a summary of the public meeting under subsection 1, along with the list of attendees and their addresses and copies of any written comments or materials they submitted at the meeting.
3. Once the department receives the modification request, the department shall make a tentative determination within one hundred twenty days to approve or disapprove the request. The department is allowed a one time extension of thirty days to prepare the draft permit decision. When the use of the thirty-day extension is anticipated, the department should inform the permittee during the initial one hundred twenty-day review period.
4. After the department makes this tentative determination, the procedures in section 33.1-24-07-45 and sections 33.1-24-07-47 through 33.1-24-07-50 for processing an initial request for coverage under the standardized permit apply to making the final determination on the modification request.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-03, 23.1-04-05, 23.1-04-08; S.L. 2017, ch. 199, § 19

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Chapter 33.1-24-08 is created as follows, subject to the contingency in S.L. 2017, ch. 199, § 75:

CHAPTER 33.1-24-08

TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS
FOR OWNERS AND OPERATORS OF
UNDERGROUND STORAGE TANKS

Section

<u>33.1-24-08-01</u>	<u>Applicability (Technical Standards and Corrective Action)</u>
<u>33.1-24-08-02</u>	<u>Installation requirements for partially excluded Underground Storage Tank Systems</u>
<u>33.1-24-08-03</u>	<u>Definitions (Technical Standards, Delivery Prohibition, and Corrective Action)</u>
<u>33.1-24-08-04</u>	<u>[Reserved]</u>
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<u>33.1-24-08-06</u>	<u>[Reserved]</u>
<u>33.1-24-08-07</u>	<u>[Reserved]</u>
<u>33.1-24-08-08</u>	<u>[Reserved]</u>
<u>33.1-24-08-09</u>	<u>[Reserved]</u>
<u>33.1-24-08-10</u>	<u>Performance Standards for New Underground Storage Tank Systems</u>
<u>33.1-24-08-11</u>	<u>Upgrading of Existing Underground Storage Tank Systems</u>
<u>33.1-24-08-12</u>	<u>Notification Requirements</u>
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<u>33.1-24-08-14</u>	<u>[Reserved]</u>
<u>33.1-24-08-15</u>	<u>[Reserved]</u>
<u>33.1-24-08-16</u>	<u>[Reserved]</u>
<u>33.1-24-08-17</u>	<u>[Reserved]</u>
<u>33.1-24-08-18</u>	<u>[Reserved]</u>
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<u>33.1-24-08-28</u>	<u>[Reserved]</u>
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<u>33.1-24-08-121</u>	<u>[Reserved]</u>
<u>33.1-24-08-122</u>	<u>[Reserved]</u>
<u>33.1-24-08-123</u>	<u>[Reserved]</u>
<u>33.1-24-08-124</u>	<u>[Reserved]</u>
<u>33.1-24-08-125</u>	<u>Ownership of an Underground Storage Tank or Underground Storage Tank System or Facility or Property on Which an Underground Storage Tank or Underground Storage Tank System Is Located (Lender Liability)</u>

33.1-24-08-126 [Reserved]

33.1-24-08-127 [Reserved]

33.1-24-08-128 [Reserved]

33.1-24-08-129 [Reserved]

33.1-24-08-130 Operating an Underground Storage Tank or Underground Storage Tank System (Lender Liability)

33.1-24-08-01. Applicability (technical standards and corrective action).

1. The requirements of this chapter apply to all owners and operators of an underground storage tank system as defined in section 33.1-24-08-03, except as otherwise provided in subsections 2, 3 and 4. Any underground storage tank system listed in subsection 3 must meet the requirements of section 33.1-24-08-02.

a. Previously deferred UST systems. Airport hydrant fuel distribution systems, UST systems with field-constructed tanks, and UST systems that store fuel solely for use by emergency power generators must meet the requirements of this chapter as follows:

(1) Airport hydrant fuel distribution systems and UST systems with field-constructed tanks must meet the requirements in Sections 33.1-24-08-70 through 33.1-24-08-72.

(2) UST systems that store fuel solely for use by emergency power generators installed on or before April 1, 2018 must meet the sections 33.1-24-08-30 through 33.1-24-08-35 requirements on or before April 1, 2021.

(3) UST systems that store fuel solely for use by emergency power generators installed after April 1, 2018 must meet all applicable requirements of this chapter at installation.

2. The following underground storage tank systems are excluded from the requirements of this chapter:

a. An underground storage tank system holding hazardous wastes listed or identified under North Dakota Century Code chapter 20-20.3, or a mixture of such hazardous waste and other regulated substances;

b. A wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act;

c. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;

d. An underground storage tank system whose capacity is one hundred ten gallons [416.39 liters] or less;

e. An underground storage tank system that contains a de minimus concentration of regulated substances; or

- f. An emergency spill or overflow containment underground storage tank system that is expeditiously emptied after use.
- 3. Partial Exclusions. Sections 33.1-24-08-10 through 33.1-24-08-43, Sections 33.1-24-08-45 through 33.1-24-08-48 Sections 33.1-24-08-60 through 33.1-24-08-64, and Sections 33.1-24-08-70 through 33.1-24-08-72 do not apply to:
 - a. Wastewater treatment tank systems not covered under subdivision b. of subsection 2 of this section;
 - b. Aboveground storage tanks associated with:
 - (1) Airport hydrant fuel distribution systems regulated under Section 33.1-24-08-70 through 33.1-24-08-73; and
 - (2) UST systems with field-constructed tanks regulated under Section 33.1-24-08-70 through 33.1-24-08-73;
 - c. Any underground storage tank systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 [42 U.S.C. 2011 and following]; and
 - d. Any underground storage tank system that is part of an emergency generator system at nuclear power generation facilities licensed by the nuclear regulatory commission and subject to nuclear regulatory commission requirements regarding design and quality criteria, including but not limited to 10 CFR part 50,

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-02. Installation requirements for partially excluded underground storage tank systems.

- 1. Owners and operators installing an underground storage tank system listed in subsection 3 of section 33.1-24-08-01 for the purpose of storing regulated substances (whether of single-wall or double-wall construction) shall meet the following requirements:
 - a. Will prevent releases due to corrosion or structural failure for the operational life of the underground storage tank system;
 - b. Is cathodically protected against corrosion, constructed of non-corrodible material, steel clad with a non-corrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and
 - c. Is constructed or lined with material that is compatible with the stored substance.

2. Notwithstanding subsection 1 an underground storage tank system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this subsection for the remaining life of the tank.

(NOTE: to subsections 1 and 2: The following codes of practice may be used as guidance for complying with this section:

- (A) National Association of Corrosion Engineers (NACE) International Standard "Practice SP 0285, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection";
- (B) NACE International Standard Practice SP 0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems";
- (C) American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems";
or
- (D) Steel Tank Institute Recommended Practice R892, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems.")

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-03. Definitions (technical standards, delivery prohibition, and corrective action).

1. "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an underground storage tank system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank system.
2. "Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an underground storage tank.
3. "Belowground release" means any release to the subsurface of the land and the groundwater. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.
4. "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

5. “Cathodic protection” is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.
6. “Cathodic protection tester” means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.
7. “CERCLA” means the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.
8. “Class A operator” means an individual who has primary responsibility to operate and maintain the underground storage tank system in accordance with applicable requirements established by the department. The Class A operator typically manages resources and personnel, such as establishing work assignments, to achieve and maintain compliance with regulatory requirements.
9. “Class B operator” means the individual who has day-to-day responsibility for implementing applicable regulatory requirements established by the department. The Class B operator typically implements in-field aspects of operation, maintenance, and associated recordkeeping for the UST system.
10. “Class C operator” means the individual responsible for initially addressing emergencies presented by a spill or release from an UST system. The Class C operator typically controls or monitors the dispensing or sale of regulated substances.
11. “Community water system (CWS)” means a public water system which serves at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents.
12. “Compatible” means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the underground storage tank.
13. “Connected piping” means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual underground storage tank system, the piping that joins two underground storage tank systems should be allocated equally between them.
14. “Consumptive use” with respect to heating oil means consumed on the premises.
15. “Containment Sump” means a liquid-tight container that protects the environment by containing leaks and spills of regulated substances from piping, dispensers,

pumps and related components in the containment area. Containment sumps may be single walled or secondarily contained and located at the top of tank (tank top or submersible turbine pump sump), underneath the dispenser (under-dispenser containment sump), or at other points in the piping run (transition or intermediate sump).

16. “Corrosion expert” means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the national association of corrosion engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.
17. “Department” means the department of environmental quality charged with the administration and enforcement of this chapter.
18. “Dielectric material” means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate underground storage tank systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the underground storage tank system (for example, tank from piping).
19. “Dispenser” means equipment located aboveground that dispenses regulated substances from the underground storage tank system.
20. “Dispenser system” means the dispenser and the equipment necessary to connect the dispenser to the underground storage tank system.
21. “Electrical equipment” means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.
22. “Excavation zone” means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the underground storage tank system is placed at the time of installation.
23. “Existing tank system” means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:
 - a. The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,
 - b. Either, (1) a continuous onsite physical construction or installation program has begun, or (2) the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction at the site or installation of the tank system to be completed within a reasonable time.

24. "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.
25. "Flowthrough process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flowthrough process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or byproducts from the production process.
26. "Free product" refers to a regulated substance that is present as a nonaqueous phase liquid (for example, liquid not dissolved in water).
27. "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.
27. "Hazardous substance underground storage tank system" means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum underground storage tank system.
29. "Heating oil" means petroleum that is No. 1, No. 2, No. 4-light, No.4-heavy, No. 5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including navy special fuel oil and bunker c); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers or furnaces.
30. "Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators and other similar devices.
31. "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.
32. "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.
33. "Motor fuel" means a complex blend of hydrocarbons typically used in the operation of a motor engine, such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any blend containing one or more of these substances (for example: motor gasoline blended with alcohol).

34. “New tank system” means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also “existing tank system.”)
35. “Noncommercial purposes” with respect to motor fuel means not for resale.
36. “On the premises where stored” with respect to heating oil means underground storage tank systems located on the same property where the stored heating oil is used.
37. “Operational life” refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under sections 33.1-24-08-60 through 33.1-24-08-64.
38. “Operator” means any person in control of, or having responsibility for, the daily operation of the underground storage tank system.
39. “Overfill release” is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.
40. “Owner” means:
- a. In the case of an underground storage tank system in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank system used for storage, use, or dispensing of regulated substances; and
 - b. In the case of any underground storage tank system in use before November 8, 1984, but no longer in use on that date, any person who owned such underground storage tank immediately before the discontinuation of its use.
41. “Person” means an individual, trust, firm, joint stock company, federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. “Person” also includes a consortium, a joint venture, a commercial entity, and the United States government.
42. “Petroleum underground storage tank system” means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimus quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.
43. “Pipe” or “piping” means a hollow cylinder or tubular conduit that is constructed of nonearthen materials that routinely contains and conveys regulated substances from the underground tank or tanks to the dispenser or dispensers, or other end-use equipment. Such piping includes any elbows, couplings, unions, valves, or other in-line fixtures that contain and convey regulated substances from the underground tank or tanks to the dispenser or dispensers. This definition does not include vent, vapor recovery, or fill lines.

44. “Pipeline facilities (including gathering lines)” are new and existing pipe rights of way and any associated equipment, facilities, or buildings.

45. “Potable drinking water well” means any hole (dug, driven, drilled, or bored) that extends into the earth until it meets groundwater which:

a. Supplies water for a noncommunity public water system, or;

b. Otherwise supplies water for household use (consisting of drinking, bathing, and cooking, or other similar uses).

Such wells may provide water to entities such as a single-family residence, group of residences, businesses, schools, parks, campgrounds, and other permanent or seasonal communities.

46. “Public water system (PWS)” means a system for the provision to the public of water for human consumption through pipes, or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least sixty days out of the year. Such term includes:

a. Any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and

b. Any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

Such term does not include any “special irrigation district.” A public water system is either a “community water system” or a “noncommunity water system.”

47. “Red tag” means a tag, device, or mechanism on the tank’s fill pipes that clearly identifies an underground storage tank as ineligible for product delivery. The tag or device is easily visible to the transfer operator and clearly states and conveys that it is unlawful to deliver to, deposit into, or accept product into the ineligible underground storage tank. The tag, device, or mechanism is generally tamper resistant.

48. “Regulated substance” means:

a. Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under North Dakota Century Code chapter 23.1-04); and

b. Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (sixty degrees Fahrenheit [10 degrees Celsius] and fourteen and seven-tenths pounds per square inch [101.3 kilopascals] absolute). The term “regulated substance”

includes, but is not limited to, petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

49. “Release” means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an underground storage tank into groundwater, surface water or subsurface soils.
50. “Release detection” means determining whether a release of a regulated substance has occurred from the underground storage tank system into the environment or a leak has occurred into the interstitial space between the underground storage tank system and its secondary barrier or secondary containment around it.
51. “Repair” means to restore to proper operating condition a tank pipe, spill prevention equipment, overflow prevention equipment, corrosion protection equipment, release detection equipment or other underground storage tank system component that has caused a release of product from the underground storage tank system or has failed to function properly. Piping repair includes installation of a single run of up to ten feet of new piping to replace existing piping. Piping repair involving installation of a single run of more than ten feet of new piping to replace existing piping constitutes replacement as defined in subsection 52. Dispenser repair includes installation of a new dispenser to replace an existing dispenser so long as work is performed entirely on or above any shear valves and check valves. Installation of a new dispenser to replace an existing dispenser constitutes replacement as defined in subsection 52 if the work is performed beneath any shear valves or check valves, or on any flexible connectors, or unburied risers.
52. “Replace or replacement” means the installation of a new underground tank system or component in substantially the same location as another tank system or component in lieu of that tank system or component
- a. For a tank - to remove a tank and install another tank.
- b. For piping - to remove ten feet or more of piping and install other piping, excluding connectors, connected to a single tank. For tanks with multiple piping runs, this definition applies independently to each piping run.
53. “Residential tank” is a tank located on property used primarily for dwelling purposes.
54. “SARA” means the Superfund Amendments and Reauthorization Act of 1986.
55. “Secondary containment or Secondarily contained” means a release prevention and release detection system for a tank or piping. This system has an inner and outer barrier with an interstitial space that is monitored for leaks. This term includes containment sumps when used for interstitial monitoring of piping.
56. “Septic tank” is a watertight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a

building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

57. “Storm-water or wastewater collection system” means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water runoff resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.
58. “Surface impoundment” is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials) that is not an injection well.
59. “Tank” is a stationary device designed to contain an accumulation of regulated substances and constructed of nonearthen materials (for example, concrete, steel, plastic) that provide structural support.
60. “Training program” means any program that provides information to and evaluates the knowledge of a Class A, Class B, or Class C operator through testing, practical demonstration, or another approach acceptable to the department regarding requirements for UST systems that meet the requirements of Sections 33.1-24-08-45 through 33.1-24-08-48.
61. “Transfer operator” means any person who delivers or deposits product into an underground storage tank. This term may include major oil companies, jobbers, petroleum transportation companies, or other product delivery entities.
62. “Under-dispenser containment (UDC)” means containment underneath a dispenser system designed to prevent leaks from the dispenser and piping within or above the UDC from reaching soil or groundwater. Such containment must:
- a. Be liquid-tight on its sides, bottom, and at any penetrations;
 - b. Be compatible with the substance conveyed by the piping; and
 - c. Allow for visual inspection and access to the components in the containment system or be monitored.
63. “Underground area” means an underground room, such as a basement, cellar, shaft, or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.
64. “Underground release” means any belowground release.
65. “Underground storage tank” means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is ten percent or more beneath the surface of the ground. This term does not include any:

- a. Farm or residential tank of one thousand one hundred gallons [4163.94 liters] or less capacity used for storing motor fuel for noncommercial purposes;
- b. Tank used for storing heating oil for consumptive use on the premises where stored;
- c. Septic tank;
- d. Pipeline facility (including gathering lines) regulated under:
 - (1) Chapter 601 of Title 49 of the Pipeline Safety Statute; or
 - (2) Which is an intrastate pipeline facility regulated under state laws as provided in chapter 601 of Title 49 of the Pipeline Safety Statute and which is determined by the United States Secretary of Transportation to be connected to a pipeline, or to be operated or intended to be capable of operating at pipeline pressure or as an integral part of a pipeline;
- e. Surface impoundment, pit, pond, or lagoon;
- f. Storm-water or wastewater collection system;
- g. Flowthrough process tank;
- h. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
- i. Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" does not include any pipes connected to any tank which is described in subdivisions a through i of this subsection.

- 66. "Underground storage tank system" or "tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.
- 67. "Unattended cardtrol facility" means a facility where control of the dispensing of a regulated substance is through a mechanical or electronic method without the constant onsite presence of a class A, class B, or class C operator.
- 68. "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.
- 69. "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

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33.1-24-08-04. [Reserved]

33.1-24-08-05. [Reserved]

33.1-24-08-06. [Reserved]

33.1-24-08-07. [Reserved]

33.1-24-08-08. [Reserved]

33.1-24-08-09. [Reserved]

33.1-24-08-10. Performance standards for new underground storage tank systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the underground storage tank system is used to store regulated substances, all owners and operators of new underground storage tank systems must meet the following requirements. In addition, except for suction piping that meets the requirements of paragraphs (a) through (e) of subdivision (2) of subsection 2 of 33.1-24-08-31, tanks and piping installed or replaced after January 1, 2009 must be secondarily contained and use interstitial monitoring in accordance with subsection 7 of 33.1-24-08-33. Secondary containment must be able to contain regulated substances leaked from the primary containment until they are detected and removed and prevent the release of regulated substances to the environment at any time during the operational life of the UST system. For cases where the piping is considered to be replaced, the entire piping run must be secondarily contained.

1. **Tanks.** Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

a. The tank is constructed of fiberglass-reinforced plastic.

(NOTE: to subdivision a of subsection 1: The following codes of practice may be used to comply with this subdivision: Underwriters Laboratories Standard 1316, "Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products Alcohols, and Alcohol-Gasoline Mixtures"; or Underwriters Laboratories of Canada S615, "Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids.");

b. The tank is constructed of steel and cathodically protected in the following manner:

(1) The tank is coated with a suitable dielectric material;

(2) Field-installed cathodic protection systems are designed by a corrosion expert;

- (3) Impressed current systems are designed to allow determination of current operating status as required in subsection 3 of section 33.1-24-08-21; and
- (4) Cathodic protection systems are operated and maintained in accordance with section 33.1-24-08-21 or according to guidelines established by the department.

(NOTE: to subdivision b of subsection 1: The following codes of practice may be used to comply with this subdivision: Steel Tank Institute "Specification STI-P3@ Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks"; Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks"; Underwriters Laboratories of Canada S603, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids", and S603.1, "Standard for External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids", and S631, "Standard for Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems"; Steel Tank Institute Standard F841, "Standard for Dual Wall Underground Steel Storage Tanks"; or NACE International Standard Practice SP 0285, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection", and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids.");

- c. The tank is constructed of steel and clad or jacketed with a non-corrodible material,

(NOTE to subdivision c of subsection 1: The following codes of practice may be used to comply with this subdivision: Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks; Steel Tank Institute ACT-100@ Specification F894, "Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks." Steel Tank Institute ACT-100-U@ Specification F961, "Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks"; or Steel Tank Institute Specification F922, "Steel Tank Institute Specification for Permatank@.");

- d. The tank is constructed of metal without additional corrosion protection measures provided that:

- (1) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and
- (2) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (1) of this subdivision for the remaining life of the tank; or

e. The tank construction and corrosion protection are determined by the department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than subdivisions a through d.

2. **Piping.** The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

a. The piping is constructed of a non-corrodible material.

(NOTE: to subdivision a of subsection 2: The following codes of practice may be used to comply with this subdivision: Underwriters Laboratories Standard 971, "Nonmetallic Underground Piping for Flammable Liquids"; Underwriters Laboratories of Canada Standard S660, "Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids.");

b. The piping is constructed of steel and cathodically protected in the following manner:

(1) The piping is coated with a suitable dielectric material;

(2) Field-installed cathodic protection systems are designed by a corrosion expert;

(3) Impressed current systems are designed to allow determination of current operating status as required in subsection 3 of section 33.1-24-08-21; and

(4) Cathodic protection systems are operated and maintained in accordance with section 33.1-24-08-21 or guidelines established by the department.

(NOTE: to subdivision b of subsection 2: The following codes of practice may be used to comply with subdivision b of subsection 2: American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; Underwriters Laboratories Subject 971A, "Outline of Investigation for Metallic Underground Fuel Pipe"; Steel Tank Institute Recommended Practice R892, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems"; NACE International Standard, Practice SP 0169 "Control of External Corrosion on Underground or Submerged Metallic Piping Systems", NACE International Standard Practice SP 0285, "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection.");

- c. The piping is constructed of metal without additional corrosion protection measures provided that:
- (1) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and
 - (2) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (1) for the remaining life of the piping;
- d. The piping construction and corrosion protection are determined by the department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in subdivisions a through c; or

3. Spill and overfill prevention equipment.

- a. Except as provided in subdivisions b and c, to prevent spilling and overfilling associated with product transfer to the underground storage tank system, owners and operators must use the following spill and overfill prevention equipment:
- (1) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and
 - (2) Overfill prevention equipment that will:
 - (a) Automatically shut off flow into the tank when the tank is no more than ninety-five percent full;
 - (b) Alert the transfer operator when the tank is no more than ninety percent full by restricting the flow into the tank or triggering a high-level alarm; or
 - (c) Restrict flow thirty minutes prior to overfilling, alert the transfer operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.
- b. Owners and operators are not required to use the spill and overfill prevention equipment specified in subdivision a if:
- (1) Alternative equipment is used that is determined by the department to be no less protective of human health and the environment than the equipment specified in paragraphs (1) and (2) of subdivision a; or

- (2) The underground storage tank system is filled by transfers of no more than twenty-five gallons [94.63 liters] at one time.
- c. Flow restrictors used in vent lines may not be used to comply with paragraph (2) of subdivision a of subsection 3 of this section when overflow prevention is installed or replaced after April 1, 2018.
- d. Spill and overflow prevention equipment must be periodically tested or inspected in accordance with section 33.1-24-08-25.
4. **Dispenser Systems.** Each UST system must be equipped with under-dispenser containment for any new dispenser system installed after September 28, 2018:
- a. A dispenser system is considered new when both the dispenser and the equipment needed to connect the dispenser to the underground storage tank system are installed at an UST facility. The equipment necessary to connect the dispenser to the underground storage tank system includes check valves, shear valves, unburied risers or flexible connectors, or other transitional components that are underneath the dispenser and connect the dispenser to the underground piping;
- b. Under-dispenser containment must be liquid-tight on its sides, bottom, and at any penetrations. Under-dispenser containment must allow for visual inspection and access to the components in the containment system or be periodically monitored for leaks from the dispenser system.
5. **Installation.** The UST system must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.
- (NOTE: to subsection 5: Tank and piping system installation practices and procedures described in the following codes of practice may be used to comply with the requirements of this subsection: American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code" and Standard 30A, "Code for Motor Fuel Dispensing Facilities and Repair Garages.")
6. **Certification of installation.** All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subsection 5 of this section by providing a certification of compliance on the underground storage tank notification form in accordance with section 33.1-24-08-12:
- a. The installer has been certified by the tank and piping manufacturers;
- b. The installer has been certified or licensed by the department;
- c. The installation has been inspected and certified by a registered professional engineer with education and experience in underground

storage tank system installation;

- d. The installation has been inspected and approved by the department;
- e. All work listed in the manufacturer's installation checklists has been completed; or
- f. The owner and operator have complied with another method for ensuring compliance with subsection 5 of this section that is determined by the department to be no less protective of human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-11. Upgrading of existing underground storage tank systems. Owners and operators must permanently close (in accordance with sections 33.1-24-08-60 through 33.1-24-08-64) any UST system that does not meet the new UST system performance standards in section 33.1-24-08-10 or has not been upgraded in accordance with subsections 2 through 4 of this section. This does not apply to previously deferred UST systems described in sections 33.1-24-08-70 to 33.1-24-08-72 and where an upgrade is determined to be appropriate by the department.

- 1. **Alternatives allowed.** All existing underground storage tank systems must comply with one of the following requirements:
 - a. New underground storage tank system performance standards under section 33.1-24-08-10;
 - b. The upgrading requirements in subsections 2 through 4; or
 - c. Closure requirements under sections 33.1-24-08-60 through 33.1-24-08-64, including applicable requirements for corrective action under sections 33.1-24-08-50 through 33.1-24-08-57.
- 2. **Tank upgrading requirements.** Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:
 - a. Interior lining. Tanks upgraded by internal lining must meet the following:
 - (1) The lining was installed in accordance with the requirements of section 33.1-24-08-23; and
 - (2) Within ten years after lining, and every five years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications. If the internal lining is no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory.

then the lined tank must be permanently closed in accordance with sections 33.1-24-08-60 through 33.1-24-08-64.

b. Cathodic protection. Tanks upgraded by cathodic protection must meet the requirements of paragraphs (2), (3) and (4) of subdivision b of subsection 1 of section 33.1-24-08-10 and the integrity of the tank must have been ensured using one of the following methods:

(1) The tank was internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system;

(2) The tank had been installed for less than ten years and is monitored monthly for releases in accordance with subsections 4 through 9 of section 33.1-24-08-33;

(3) The tank had been installed for less than ten years and is assessed for corrosion holes by conducting two tightness tests that meet the requirements of subsection 3 of section 33.1-24-08-33. The first tightness test must have been conducted prior to installing the cathodic protection system. The second tightness test must have been conducted between three and six months following the first operation of the cathodic protection system; or

(4) The tank was assessed for corrosion holes by a method that is determined by the department to prevent releases in a manner that is no less protective of human health and the environment than paragraphs (1) through (3).

c. Internal lining combined with cathodic protection. Tanks upgraded by both internal lining and cathodic protection must meet the following:

(1) The lining was installed in accordance with the requirements of section 33.1-24-08-23; and

(2) The cathodic protection system meets the requirements of paragraphs (2), (3) and (4) of subdivision b of subsection 1 of section 33.1-24-08-10.

(NOTE: to subsection 2: The following historical codes of practice were listed as options for complying with subdivision 2 of this section: American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection"; National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and American Petroleum Institute Recommended Practice 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."

Note to paragraph (2) of subdivision a of subsection 2: The following codes of

practice may be used to comply with the periodic lining inspection requirement of this section: American Petroleum Institute Recommended Practice 1631, "Interior Lining and Periodic Inspection of Underground Storage Tanks"; National Leak Prevention Association Standard 631, Chapter B "Future Internal Inspection Requirements for Lined Tanks"; or Ken Wilcox Associates Recommended Practice, "Recommended Practice for Inspecting Buried Lined Steel Tanks Using a Video Camera.")

3. **Piping upgrading requirements.** Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of paragraphs (2), (3) and (4) of subdivision b of subsection 2 of section 33.1-24-08-10.

(NOTE: to subsection 3: The codes of practice listed in the note following subdivision b of subsection 2 of section 33.1-24-08-10 may be used to comply with this requirement.)

4. **Spill and overflow prevention equipment.** To prevent spilling and overflowing associated with product transfer to the underground storage tank system, all existing underground storage tank systems must comply with underground storage tank system spill and overflow prevention equipment requirements specified in subsection 3 of section 33.1-24-08-10.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-12. Notification requirements.

1. After May 8, 1986, an owner must submit notice of a tank system's existence to the department within 30 days of bringing the underground storage tank system into use. Owners must use, the form prescribed in appendix I.

(NOTE: to subsection 1: Owners and operators of underground storage tank systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, on a form published by the environmental protection agency on November 8, 1985, (50 Federal Register 46602) unless notice was given pursuant to section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. Owners and operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in appendix I.)

2. Within 30 days of acquisition, any person who assumes ownership of a regulated underground storage tank system, except as described in subsection 1, must submit a notice of the ownership change to the department, using the form in appendix I, state form in accordance with subsection 3.

3. Owners required to submit notices under subsection 1 and 2 must provide notices to the department for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.
4. Notices required to be submitted under subsection 1 must provide all of the information in sections I through VI of the prescribed form for each tank for which notice must be given.
5. All owners and operators of new underground storage tank systems must certify in the notification form compliance with the following requirements:
 - a. Installation of tanks and piping under subsection 6 of section 33.1-24-08-10;
 - b. Cathodic protection of steel tanks and piping under subsections 1 and 2 of section 33.1-24-08-10;
 - c. Financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106; and
 - d. Release detection under sections 33.1-24-08-31 and 33.1-24-08-32.
6. Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under subsection 1. The statement provided in appendix II, when used on shipping tickets and invoices, may be used to comply with this requirement.
7. All owners and operators of new underground storage tank systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in subsection 5 of section 33.1-24-08-10.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-13. [Reserved]

33.1-24-08-14. [Reserved]

33.1-24-08-15. [Reserved]

33.1-24-08-16. [Reserved]

33.1-24-08-17. [Reserved]

33.1-24-08-18. [Reserved]

33.1-24-08-19. [Reserved]

33.1-24-08-20. Spill and overfill control.

1. Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

(NOTE: The transfer procedures described in National Fire Protection Association Standard 385 "Standard for Tank Vehicles for Flammable and Combustible Liquids" or American Petroleum Institute Recommended Practice 1007, "Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles" may be used to comply with this subsection. Further guidance on spill and overfill prevention appears in American Petroleum Institute, Recommended Practice 1621, "Bulk Liquid Stock Control at Retail Outlets.")

2. The owner and operator must report, investigate, and clean up any spills and overfills in accordance with section 33.1-24-08-43.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-21. Operation and maintenance of corrosion protection. All owners and operators of metal underground storage tank systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented until the underground storage tank system is permanently closed or undergoes a change-in-service pursuant to 33.1-24-08-61:

1. All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground;
2. All underground storage tank systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:
 - a. Frequency. All cathodic protection systems must be tested within six months of installation and at least every three years thereafter or according to another reasonable timeframe established by the department;
 - b. Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association;

(NOTE: to subsection 2: The following codes of practice may be used to comply with subsection 2: NACE International Test Method TM 0101, "Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage

Tank Systems”; NACE International Test Method TM0497, “Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems”; Steel Tank Institute Recommended Practice R051, “Cathodic Protection Testing Procedures for STI-P3® USTs”; NACE International Standard Practice SP 0285, “External Control of Underground Storage Tank Systems by Cathodic Protection”; or NACE International Standard Practice SP 0169, “Control of External Corrosion on Underground or Submerged Metallic Piping Systems.”)

3. Underground storage tank systems with impressed current cathodic protection systems must also be inspected every sixty days to ensure the equipment is running properly; and
4. For underground storage tank systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with section 33.1-24-08-24) to demonstrate compliance with the performance standards. These records must provide the following:
 - a. The results of the last three inspections required in subsection 3; and
 - b. The results of testing from the last two inspections required in subsection 2.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-22. Compatibility.

1. Owners and operators must use an underground storage tank system made of or lined with materials that are compatible with the substance stored in the underground storage tank system.
2. Owners and operators must notify the department at least 30 days prior to switching to a regulated substance containing greater than 10 percent ethanol, greater than 20 percent biodiesel, or any other regulated substance identified by the department. In addition, owners and operators with underground storage tank systems storing these regulated substances must meet one of the following:
 - a. Demonstrate compatibility of the UST system (including the tank, piping, containment sumps, pumping equipment, release detection equipment, spill equipment, and overfill equipment). Owners and operators may demonstrate compatibility of the UST system by using one of the following options:
 - (1) Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored; or
 - (2) Equipment or component manufacturer approval. The manufacturer’s approval must be in writing, indicate an affirmative

statement of compatibility, specify the range of biofuel blends the equipment or component is compatible with, and be from the equipment or component manufacturer; or

- b. Use another option determined by the department to be no less protective of human health and the environment than the options listed in subdivision a of subsection 2:
3. Owners and operators must maintain records in accordance with subsection 2 of section 33.1-24-08-24 documenting compliance with subsection 2 of this section for as long as the UST system is used to store the regulated substance.

(NOTE: The following code of practice may be useful in complying with this section: American Petroleum Institute Recommended Practice 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations").

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-23. Repairs Allowed. Owners and operators of underground storage tank systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the underground storage tank system is used to store regulated substances. The repairs must meet the following requirements:

1. Repairs to underground storage tank systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory

(NOTE: to subsection 1: The following codes of practice may be used to comply with this subsection: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Recommended Practice RP2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines"; American Petroleum Institute Recommended Practice RP1631, "Recommended Practice for the Interior Lining and Periodic Inspection Underground Storage Tanks"; National Fire Protection Association Standard 326, "Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair"; National Leak Prevention Association Standard 631, Chapter A, "Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks by"; Steel Tank Institute Recommended Practice R972, "Recommended Practice for the Addition of Supplemental Anodes to STI-P3® Tanks"; NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection"; or Fiberglass Tank and Pipe Institute Recommended Practice T-95-02, "Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks.");

2. Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory;

3. Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Non-corrodible pipes and fittings may be repaired in accordance with the manufacturer's specifications;
4. Repairs to secondary containment areas of tanks and piping used for interstitial monitoring and to containment sumps used for interstitial monitoring of piping must have the secondary containment tested for tightness according to the manufacturer's instructions, a code of practice developed by a nationally recognized association or independent testing laboratory, or according to requirements established by the department within 30 days following the date of completion of the repair. All other repairs to tanks and piping must be tightness tested in accordance with subsection 3 of section 33.1-24-08-33 and subsection 2 of section 33.1-24-08-34 within thirty days following the date of the completion of the repair except as provided in subdivisions a through c:
 - a. The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory;
 - b. The repaired portion of the underground storage tank system is monitored monthly for releases in accordance with a method specified in subsections 4 through 9 of section 33.1-24-08-33; or
 - c. Another test method is used that is determined by the department to be no less protective of human health and the environment than those listed above;

(NOTE: to subsection 4: The following codes of practice may be used to comply with subsection 4 of this subsection: Steel Tank Institute Recommended Practice R012, "Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks"; or Fiberglass Tank and Pipe Institute Protocol, "Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks with Dry Annular Space"; Petroleum Equipment Institute Recommended Practice RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities").
5. Within six months following the repair of any cathodically protected underground storage tank system, the cathodic protection system must be tested in accordance with subsections 2 and 3 of section 33.1-24-08-21 to ensure that it is operating properly; and
6. Within thirty days following any repair to spill or overfill prevention equipment, the repaired spill or overfill prevention equipment must be tested or inspected, as appropriate, in accordance with section 33.1-24-08-25 to ensure it is operating properly.
7. Underground storage tank system owners and operators must maintain records (in accordance with section 33.1-24-08-24) of each repair until the underground storage tank system is permanently closed or undergoes a change-in-service

pursuant to section 33.1-24-08-61.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-24. Reporting and recordkeeping. Owners and operators of underground storage tank systems must cooperate fully with inspections, monitoring, and testing conducted by the department, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to North Dakota Century Code section 23.1-04-06.

1. **Reporting.** Owners and operators must submit the following information to the department:
 - a. Notification for all underground storage tank systems (section 33.1-24-08-12), which includes certification of installation for new underground storage tank systems (subsection 6 of section 33.1-24-08-10) and notification when any person assumes ownership of an UST system subsection 2 of section 33.1-24-08-12;
 - b. Notification prior to UST systems switching to certain regulated substances subsection 2 of section 33.1-24-08-22
 - c. Reports of all releases including suspected releases (section 33.1-24-08-40), spills and overfills (section 33.1-24-08-43), and confirmed releases (section 33.1-24-08-51);
 - d. Corrective actions planned or taken including initial abatement measures (section 33.1-24-08-52), initial site characterization (section 33.1-24-08-53), free product removal (section 33.1-24-08-54), investigation of soil and groundwater cleanup (section 33.1-24-08-55), and corrective action plan (section 33.1-24-08-56); and
 - e. A notification before permanent closure or change in service (section 33.1-24-08-61).
2. **Recordkeeping.** Owners and operators must maintain the following information:
 - a. A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (subdivision d of subsection 1 of section 33.1-24-08-10, subdivision c of subsection 2 of section 33.1-24-08-10);
 - b. Documentation of operation of corrosion protection equipment (section 33.1-24-08-21);
 - c. Documentation of compatibility for UST systems (subsection 3 of 33.1-24-08-22);
 - d. Documentation of underground storage tank system repairs (subsection 7 of section 33.1-24-08-23);

- e. Documentation of compliance for spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping (subsection 3 of section 33.1-24-08-25);
- f. Documentation of periodic walkthrough inspections (subsection 2 of section 33.1-24-08-26);
- g. Documentation of compliance with release detection requirements (section 33.1-24-08-35); and
- h. Results of the site investigation conducted at permanent closure (section 33.1-24-08-64).

3. Availability and Maintenance of Records. Owners and operators must keep the records required either:

- a. At the underground storage tank site and immediately available for inspection by the department;
- b. At a readily available alternative site and be provided for inspection to the department upon request; or
- c. In case of permanent closure records required under section 33.1-24-08-64, owners and operators are also provided with the additional alternative of mailing closure records to the department if they cannot be kept at the site or an alternative site as indicated above.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-25. Periodic testing of spill prevention equipment and containment sumps used for interstitial monitoring of piping and periodic inspection of overfill prevention equipment.

- 1. Owners and operators of UST systems with spill and overfill prevention equipment and containment sumps used for interstitial monitoring of piping must meet these requirements to ensure the equipment is operating properly and will prevent releases to the environment:
 - a. Spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) and containment sumps used for interstitial monitoring of piping must prevent releases to the environment by meeting one of the following:
 - (1) The equipment is double walled and the integrity of both walls is periodically monitored at a frequency not less than the frequency of the walkthrough inspections described in section 33.1-24-08-26. Owners and operators shall begin fulfilling paragraph (2) of subdivision a of subsection 1 and conduct a test within 30 days of discontinuing periodic monitoring of this equipment; or

(2) The spill prevention equipment and containment sumps used for interstitial monitoring of piping are tested at least once every three years to ensure the equipment is liquid tight by using vacuum, pressure, or liquid testing in accordance with one of the following criteria:

(a) Requirements developed by the manufacturer

(NOTE: Owners and operators may use this option only if the manufacturer has developed requirements);

(b) Code of practice developed by a nationally recognized association or independent testing laboratory; or

(c) Requirements determined by the department to be no less protective of human health and the environment than the requirements listed in subparagraphs (a) and (b) of paragraph (2) of subdivision a of subsection 1.

b. Overfill prevention equipment must be inspected at least once every three years. At a minimum, the inspection must ensure that overfill prevention equipment is set to activate at the correct level specified in subsection 3 of section 33.1-24-08-10 and will activate when regulated substance reaches that level. Inspections must be conducted in accordance with one of the criteria in subparagraphs (a) through (c) of paragraph (2) of subdivision a of subsection 1.

2. Owners and operators must begin meeting these requirements as follows:

a. For UST systems in use on or before April 1, 2018, the initial spill prevention equipment test, containment sump test and overfill prevention equipment inspection must be conducted not later than April 1, 2021.

b. For UST systems brought into use after April 1, 2018, these requirements apply at installation.

3. Owners and operators must maintain records as follows (in accordance with 33.1-24-08-24) for spill prevention equipment, containment sumps used for interstitial monitoring of piping, and overfill prevention equipment:

a. All records of testing or inspection must be maintained for three years; and

b. For spill prevention equipment and containment sumps used for interstitial monitoring of piping not tested every three years, documentation showing that the prevention equipment is double walled and the integrity of both walls is periodically monitored must be maintained for as long as the equipment is periodically monitored.

(NOTE: to paragraph (2) of subdivision a of subsection 1 and subdivision b of subsection 1: the following code of practice may be used to comply with paragraph (2) of subdivision

a of subsection 1 and subdivision b of subsection 1: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities.")

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-26 Periodic operation and maintenance walkthrough inspections.

1 To properly operate and maintain UST systems, not later than April 1, 2021 owners and operators must meet one of the following:

a. Conduct a walkthrough inspection that, at a minimum, checks the following equipment as specified below:

(1) **Every 30 days** (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery):

(a) Spill prevention equipment - visually check for damage; remove liquid or debris; check for and remove obstructions in the fill pipe; check the fill cap to make sure it is securely on the fill pipe; and, for double walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area, and

(b) Release detection equipment - check to make sure the release detection equipment is operating with no alarms or other unusual operating conditions present; and ensure records of release detection testing are reviewed and current; and

(2) **Annually:**

(a) Containment sumps - visually check for damage, leaks to the containment area, or releases to the environment; remove liquid (in contained sumps) or debris; and, for double walled sumps with interstitial monitoring, check for a leak in the interstitial area, and

(b) Hand held release detection equipment - check devices such as tank gauge sticks or groundwater bailers for operability and serviceability;

b. Conduct operation and maintenance walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory that checks equipment comparable to subdivision a of subsection 1 of section 33.1-24-08-25; or

c. Conduct operation and maintenance walkthrough inspections developed

by the department that checks equipment comparable to subdivision a of subsection 1 of this section.

2. Owners and operators must maintain records (in accordance with 33.1-24-08-24) of operation and maintenance walkthrough inspections for one year. Records must include a list of each area checked, whether each area checked was acceptable or needed action taken, a description of actions taken to correct an issue, and delivery records if spill prevention equipment is checked less frequently than every 30 days due to infrequent deliveries.

(NOTE: to subdivision b of subsection 1: the following code of practice may be used to comply with subdivision b of subsection 1 of section 33.1-24-08-26: Petroleum Equipment Institute Recommended Practice RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems.")

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-27. [Reserved]

33.1-24-08-28. [Reserved]

33.1-24-08-29. [Reserved]

33.1-24-08-30. General release detection requirements for all underground storage tank systems.

1. Owners and operators of underground storage tank systems must provide a method, or combination of methods, of release detection that:
 - a. Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;
 - b. Is installed and calibrated in accordance with the manufacturer's instructions;
 - c. Beginning on April 1, 2021, is operated and maintained, and electronic and mechanical components are tested for proper operation, in accordance with one of the following: manufacturer's instructions; a code of practice developed by a nationally recognized association or independent testing laboratory; or requirements determined by the department to be no less protective of human health and the environment than the two options listed above. A test of the proper operation must be performed at least annually and, at a minimum, as applicable to the facility, cover the following components and criteria:
 - (1) Automatic tank gauge and other controllers: test alarm; verify system configuration; test battery backup;
 - (2) Probes and sensors: inspect for residual buildup; ensure floats

move freely; ensure shaft is not damaged; ensure cables are free of kinks and breaks; test alarm operability and communication with controller;

(3) Automatic line leak detector: test operation to meet criteria in subsection 1 of 33.1-24-08-34 by simulating a leak;

(4) Vacuum pumps and pressure gauges: ensure proper communication with sensors and controller; and

(5) Hand-held electronic sampling equipment associated with groundwater and vapor monitoring: ensure proper operation.

(NOTE: to subdivision c of subsection 1: The following code of practice may be used to comply with paragraph subdivision c of subsection 1 of this section: Petroleum Equipment Institute Publication RP1200, "Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities.")

d. Meets the performance requirements in sections 33.1-24-08-33, 33.1-24-08-34, 33.1-24-08-70, 33.1-24-08-71 or 33.1-24-08-72, as applicable, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, the methods listed in subsections 2, 3, and 4 of section 33.1-24-08-33; subsections 1 and 2 of section 33.1-24-08-34; and sections 33.1-24-08-70, 33.1-24-08-71 or 33.1-24-08-72, must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule with a probability of detection of ninety-five hundredths and a probability of false alarm of five hundredths.

2. When a release detection method operated in accordance with the performance standards in sections 33.1-24-08-33, 33.1-24-08-34 and 33.1-24-08-70, 33.1-24-08-71 or 33.1-24-08-72 indicates a release may have occurred, owners and operators must notify the department in accordance with sections 33.1-24-08-40 through 33.1-24-08-43.

3. Any underground storage tank system that cannot apply a method of release detection that complies with the requirements of this section must complete the closure procedures in sections 33.1-24-08-60 through 33.1-24-08-64. For previously deferred UST systems described in sections 33.1-24-08-01, 33.1-24-08-02 or 33.1-24-08-03 and 33.1-24-08-70, 33.1-24-08-71 or 33.1-24-08-72, this requirement applies after the effective dates described in paragraph (2) and (3) of subdivision a of subsection 1 of section 33.1-24-08-01 and subsection 1 of section 33.1-24-08-71.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-31. Release detection requirements for petroleum underground storage

tank systems. Owners and operators of petroleum underground storage tank systems must provide release detection for tanks and piping as follows:

1. **Tanks.** Tanks must be monitored for releases as follows:

a. Tanks installed on or before September 28, 2018 must be monitored for releases at least every thirty days using one of the methods listed in subsections 4 through 9 of section 33.1-24-08-33 except that:

(1) Underground storage tank systems that meet the performance standards in section 33.1-24-08-10 or 33.1-24-08-11, and the monthly inventory control requirements in subsection 1 or 2 of section 33.1-24-08-33, may use tank tightness testing (conducted in accordance with subsection 3 of section 33.1-24-08-33) at least every five years until ten years after the tank was installed; and tanks with capacity of five hundred fifty gallons [2081.98 liters] or less and tanks with a capacity of 551 to 1,000 gallons that meet the tank diameter criteria in subsection 2 of section 33.1-24-08-33 may use manual tank gauging (conducted in accordance with subsection 2 of section 33.1-24-08-33).

(2) Tanks installed after September 28, 2018 must be monitored for releases at least every 30 days in accordance with subsection 7 of section 33.1-24-08-33.

2. **Piping.** Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

a. Piping installed on or before September 28, 2018 must meet one of the following:

(1) Pressurized piping. Underground piping that conveys regulated substances under pressure must:

(a) Be equipped with an automatic line leak detector conducted in accordance with subsection 1 of section 33.1-24-08-34; and

(b) Have an annual line tightness test conducted in accordance with subsection 2 of section 33.1-24-08-34 or have monthly monitoring conducted in accordance with subsection 3 of section 33.1-24-08-34.

(2) Suction piping. Underground piping that conveys regulated substances under suction must either have line tightness test conducted at least every three years and in accordance with subsection 2 of section 33.1-24-08-34, or use a monthly monitoring method conducted in accordance with subsection 3 of section 33.1-24-08-34. No release detection is required for suction piping that is

designed and constructed to meet the following standards:

- (a) The below-grade piping operates at less than atmospheric pressure;
 - (b) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;
 - (c) Only one check valve is included in each suction line;
 - (d) The check valve is located directly below and as close as practical to the suction pump; and
 - (e) A method is provided that allows compliance with paragraphs (b) through (d) to be readily determined.
- b. Piping installed or replaced after September 28, 2018 must meet one of the following:
- (1) Pressurized piping must be monitored for releases at least every 30 days in accordance with subsection 7 of section 33.1-24-08-33 and be equipped with an automatic line leak detector in accordance with subsection 1 of section 33.1-24-08-34
 - (2) Suction piping must be monitored for releases at least every 30 days in accordance with subsection 7 of section 33.1-24-08-33. No release detection is required for suction piping that meets subparagraphs (a) through (e) of paragraph (2) of subdivision a of subsection 2 of this section.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-32. Release detection requirements for hazardous substance underground storage tank systems. Owners and operators of hazardous substance underground storage tank systems must provide containment that meets the following requirements and monitor these systems using subsection 7 of section 33.1-24-08-33 at least every 30 days:

- 1. Secondary containment systems must be designed, constructed and installed:
 - a. Contain regulated substances leaked from the primary containment until they are detected and removed;
 - b. Prevent the release of regulated substances to the environment at any time during the operational life of the underground storage tank system; and

c. Be checked for evidence of a release at least every thirty days.

(NOTE: to subsection 1: The provisions of section 33.1-24-05-106 may be used to comply with this subsection for tanks installed on or before April 1, 2018.)

2. Double-walled tanks must be designed, constructed, and installed to:

a. Contain a leak from any portion of the inner tank within the outer wall; and

b. Detect the failure of the inner wall.

3. External liners (including vaults) must be designed, constructed, and installed to:

a. Contain one hundred percent of the capacity of the largest tank within its boundary;

b. Prevent the interference of precipitation or groundwater intrusion with the ability to contain or detect a release of regulated substances; and

c. Surround the tank completely (for example, it is capable of preventing lateral as well as vertical migration of regulated substances).

4. Underground piping must be equipped with secondary containment that satisfies the requirements of subsection 1 above (for example, trench liners, double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with subsection 1 of section 33.1-24-08-34.

5. For hazardous substance UST systems installed on or before April 1, 2018 other methods of release detection may be used if owners and operators:

a. Demonstrate to the department that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in subsections 2 through 9 of section 33.1-24-08-33 can detect a release of petroleum;

b. Provide information to the department on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the underground storage tank site; and

c. Obtain approval from the department to use the alternate release detection method before the installation and operation of the new underground storage tank system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-33. Methods of release detection for tanks. Each method of release detection for tanks used to meet the requirements of section 33.1-24-08-31 must be conducted in accordance with the following:

1. **Inventory control.** Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least one percent of flowthrough plus one hundred thirty gallons [492.10 liters] on a monthly basis in the following manner:
 - a. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;
 - b. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch [3.05 millimeters];
 - c. The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;
 - d. Deliveries are made through a drop tube that extends to within one foot [0.30 meters] of the tank bottom;
 - e. Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of six cubic inches [98.2 milliliters] for every five gallons [18.93 liters] of product withdrawn; and
 - f. The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch [3.05 millimeters] at least once a month.

(NOTE: to subsection 1: Practices described in the American Petroleum Institute, Recommended Practice RP 1621, "Bulk Liquid Stock Control at Retail Outlets", may be used, where applicable, as guidance in meeting the requirements.)

2. **Manual tank gauging.** Manual tank gauging must meet the following requirements:
 - a. Tank liquid level measurements are taken at the beginning and ending of a period using the appropriate minimum duration of test value in the table below during which no liquid is added to or removed from the tank;
 - b. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;
 - c. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch [3.05

millimeters];

- d. A release is suspected and subject to the requirements of sections 33.1-24-08-40 through 33.1-24-08-43 if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

<u>Nominal Tank Capacity</u>	<u>Minimum Duration Of Test</u>	<u>Weekly Standard (one test)</u>	<u>Monthly Standard (average of four tests)</u>
<u>550 gallons or less</u>	<u>36 hours</u>	<u>10 gallons</u>	<u>5 gallons</u>
<u>551-1,000 gallons (when tank diameter is 64 inches)</u>	<u>44 hours</u>	<u>9 gallons</u>	<u>4 gallons</u>
<u>551-1,000 gallons (when tank diameter is 48 inches)</u>	<u>58 hours</u>	<u>12 gallons</u>	<u>6 gallons</u>
<u>551-1,000 gallons (also requires periodic tank tightness testing)</u>	<u>36 hours</u>	<u>13 gallons</u>	<u>7 gallons</u>
<u>1001-2,000 gallons (also requires periodic tank tightness testing)</u>	<u>36 hours</u>	<u>26 gallons</u>	<u>13 gallons</u>

- e. Tanks of 550 gallons [2081.98 liters] or less nominal capacity and tanks with a nominal capacity of 551 to 1,000 gallons [2085.76 to 3785.41 liters] that meet the tank diameter criteria in the table in subdivision d of subsection 2 may use this as the sole method of release detection. All other tanks with a nominal capacity of 551 to 2,000 gallons [2085.76 to 7570.80 liters] may use this method in place of inventory control in subsection 1. Tanks of greater than 2,000 gallons [7570.80 liters] nominal capacity may not use this method to meet the requirements of sections 33.1-24-08-30 through 33.1-24-08-35.

3. **Tank tightness testing.** Tank tightness testing (or another test of equivalent performance) must be capable of detecting a one-tenth gallon [.38 liter] per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

4. **Automatic tank gauging.** Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

- a. The automatic product level monitor test can detect a two-tenths gallon [.76

liter] per hour leak rate from any portion of the tank that routinely contains product;

b. The automatic tank gauging equipment must meet the inventory control (or other test of equivalent performance) requirements of subsection 1; and

c. The test must be performed with the system operating in one of the following modes:

(1) In-tank static testing conducted at least once every 30 days; or

(2) Continuous in-tank leak detection operating on an uninterrupted basis or operating within a process that allows the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

5. **Vapor monitoring.** Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

a. The materials used as backfill are sufficiently porous (for example, gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

b. The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (for example, gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

c. The measurement of vapors by the monitoring device is not rendered inoperative by the groundwater, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than thirty days;

d. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

e. The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

f. In the underground storage tank excavation zone, the site is assessed to ensure compliance with the requirements in subdivisions a through d and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

g. Monitoring wells are clearly marked and secured to avoid unauthorized

access and tampering.

6. Groundwater monitoring. Testing or monitoring for liquids on the groundwater must meet the following requirements:

- a. The regulated substance stored is immiscible in water and has a specific gravity of less than one;
- b. Groundwater is never more than twenty feet [6.07 meters] from the ground surface and the hydraulic conductivity of the soils between the underground storage tank system and the monitoring wells or devices is not less than one one-hundredths centimeter per second (for example, the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);
- c. The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low groundwater conditions;
- d. Monitoring wells must be sealed from the ground surface to the top of the filter pack;
- e. Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;
- f. The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch [3.05 millimeters] free product on top of the groundwater in the monitoring wells;
- g. Within and immediately below the underground storage tank system excavation zone, the site is assessed to ensure compliance with the requirements in subdivisions a through e and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and
- h. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

7. Interstitial monitoring. Interstitial monitoring between the underground storage tank system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

- a. For double-walled underground storage tank systems, the sampling or testing method can detect a leak through the inner wall in any portion of the tank that routinely contains product;

b. For underground storage tank systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a leak between the underground storage tank system and the secondary barrier;

(1) The secondary barrier around or beneath the underground storage tank system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} centimeter per second for the regulated substance stored) to direct a leak to the monitoring point and permit its detection;

(2) The barrier is compatible with the regulated substance stored so that a release from the underground storage tank system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(3) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(4) The groundwater, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than thirty days;

(5) The site is assessed to ensure that the secondary barrier is always above the groundwater and not in a twenty-five year floodplain, unless the barrier and monitoring designs are for use under such conditions; and

(6) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

c. For tanks with an internally fitted liner, an automated device can detect a leak between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

8. Statistical inventory reconciliation. Release detection methods based on the application of statistical principles to inventory data similar to those described in subsection 1 of this section must meet the following requirements:

a. Report a quantitative result with a calculated leak rate;

b. Be capable of detecting a leak rate of 0.2 gallon per hour or a release of 150 gallons within 30 days; and

c. Use a threshold that does not exceed one-half the minimum detectible leak rate.

9. **Other methods.** Any other type of release detection method, or combination of methods, can be used if:

a. It can detect a two-tenths gallon [.76 liter] per hour leak rate or a release of one hundred fifty gallons [567.81 liters] within a month with a probability of detection of ninety-five hundredths and a probability of false alarm of five one-hundredths; or

b. The department may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subsections 3 through 8. In comparing methods, the department shall consider the size of release the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the department on its use to ensure the protection of human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-34. Methods of release detection for piping. Each method of release detection for piping used to meet the requirements of subsection 2 of section 33.1-24-08-10 and section 33.1-24-08-31 must be conducted in accordance with the following:

1. **Automatic line leak detectors.** Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of three gallons [11.36 liters] per hour at ten pounds per square inch line pressure within one hour. An annual test of the operation of the leak detector must be conducted in accordance with the subdivision c of subsection 1 of section 33.1-24-08-30.

2. **Line tightness testing.** A periodic test of piping may be conducted only if it can detect a one-tenth gallon [.38 liter] per hour leak rate at one and one-half times the operating pressure.

3. **Applicable tank methods.** Except as described in subsection 1 of section 33.1-24-08-31, any of the methods in subsections 5 through 9 of section 33.1-24-08-33 may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-35. Release detection recordkeeping. All underground storage tank system owners and operators must maintain records in accordance with section 33.1-24-08-24

demonstrating compliance with all applicable requirements of sections 33.1-24-08-30 through 33.1-24-08-35. These records must include the following:

1. All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for five years or for another reasonable period of time determined by the department, from the date of installation. Not later than April 1, 2021, records of site assessments required under subdivision f of subsection 5 and subdivision g of subsection 6 of section 33.1-24-08-33 must be maintained for as long as the methods are used. Records of site assessments developed after April 1, 2018 must be signed by a professional engineer or professional geologist, or equivalent licensed professional with experience in environmental engineering, hydrogeology, or other relevant technical discipline acceptable to the department;
2. The results of any sampling, testing, or monitoring must be maintained for at least one year, or for another reasonable period of time determined by the department, except as follows:
 - a. The results of annual operation tests conducted in accordance with subdivision c of subsection 1 of section 33.1-24-08-30 must be maintained for three years. At a minimum, the results must list each component tested, indicate whether each component tested meets criteria in subdivision c of subsection 1 of section 33.1-24-08-30 or needs to have action taken, and describe any action taken to correct an issue; and
 - b. The results of tank tightness testing conducted in accordance with subsection 3 of section 33.1-24-08-33 must be retained until the next test is conducted; and
 - c. The results of tank tightness testing, line tightness testing, and vapor monitoring using a tracer compound placed in the tank system conducted in accordance with subsection 4 of section 33.1-24-08-72 must be retained until the next test is conducted.
3. Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located onsite must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the department. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for five years from the date of installation.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-36. Applicability (delivery prohibition).

1. Tank owners and operators and transfer operators are responsible for ensuring that product is not delivered, deposited, or accepted into an underground storage

tank identified by the department as ineligible to receive product.

2. For purposes of this section the term “underground storage tank” means those tanks that satisfy the definition of petroleum underground storage tank system in section 33.1-24-08-03, except for those tanks identified as excluded or deferred storage tanks.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-37. Criteria for delivery prohibition.

1. An underground storage tank shall be classified as ineligible for delivery, deposit, or acceptance of product upon determination by the department that the underground storage tank meets one or more of the following conditions:
 - a. Spill prevention equipment as required by this chapter is not installed;
 - b. Overfill protection equipment as required by this chapter is not installed;
 - c. Leak detection equipment as required by this chapter is not installed;
 - d. Corrosion protection equipment as required by this chapter is not installed;
or
 - e. Other conditions which the department determines may present an imminent and substantial endangerment to public health and the environment.
2. The department may also classify an underground storage tank as ineligible for delivery, deposit, or acceptance of product if the owner or operator of that tank has been issued a written warning or citation (for example, field citation, warning letter, notice of violation), and has failed to take corrective action, within a reasonable period of time determined by the department, under any of the following circumstances:
 - a. Failure to properly operate or maintain leak detection equipment;
 - b. Failure to properly operate or maintain spill, overfill, or corrosion protection equipment;
 - c. Failure to insure owners and operators of UST systems have designated class A, class B, and class C operators;
 - d. Failure to maintain financial responsibility;
 - e. Failure to protect a buried metal flexible connector from corrosion; or

- f. Other conditions which the department determines may present an imminent and substantial endangerment to public health and the environment.
3. The department shall retain the discretion to decide whether to identify an underground storage tank as ineligible to deliver, deposit, or accept product based on whether the prohibition is in the best interest of the public. In those cases where prohibition of delivery, deposit, or acceptance of product to an underground storage tank is not in the best interest of the public (for example, certain emergency generator underground storage tanks), the department may classify an underground storage tank as ineligible to receive product but authorize an emergency delivery.
4. The department may also consider not treating an underground storage tank as ineligible for delivery, deposit, or acceptance of product if such treatment would jeopardize the availability of, or access to, motor fuel in any rural and remote areas. The department shall only defer application of delivery prohibition for up to one hundred eighty days after determining an underground storage tank is ineligible for delivery, deposit, or acceptance of product.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-38. Mechanisms for designating tanks ineligible for delivery.

1. Upon identifying an underground storage tank as ineligible for delivery, deposit, or acceptance of product, the department shall notify tank owners or operators in writing (for example, field notification or mail) prior to prohibiting the delivery, deposit, or acceptance of product into the ineligible tank.
2. After reasonable effort is made to notify the underground storage tank owner or operator in writing, the department may affix a “red tag” to the fill pipe of the noncompliant underground storage tank system using a tamper-resistant strap or straps, fill pipe bag, or any combination thereof so that the tag clearly identifies the tank as ineligible to receive product.
3. The department shall develop a process and procedure for notifying transfer operators when an underground storage tank is ineligible for delivery, deposit, or acceptance of product. Notice shall be made available (for example, electronic listing) to transfer operators within twenty-four hours of an underground storage tank being identified as ineligible to receive product.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-39. Reclassifying ineligible tanks as eligible for delivery.

1. Upon notification by the owner or operator that the violation or violations has or have been corrected, the department shall confirm compliance.
2. The department shall reclassify an ineligible underground storage tank as eligible to receive product the same day the department confirms that the underground storage tank has been returned to compliance. Likewise, notice shall be made available to transfer operators the same day an ineligible tank has been reclassified as eligible to receive product.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-40. Reporting of suspected releases. Owners and operators of underground storage tank systems must report to the department within twenty-four hours, or another reasonable period specified by the department, and follow the procedures in section 33.1-24-08-42 for any of the following conditions:

1. The discovery by owners and operators or others of released regulated substances at the underground storage tank site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water):
2. Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the underground storage tank system, an unexplained presence of water in the tank, or liquid in the interstitial space of secondarily contained systems), unless:
 - a. The system equipment or component is found not to be releasing regulated substances to the environment;
 - b. Any defective system equipment or component is immediately repaired or replaced; and
 - c. For secondarily contained systems, except as provided for in paragraph (4) of subdivision b of subsection 7 of section 33.1-24-08-33, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed.
3. Monitoring results, including investigation of an alarm, from a release detection method required under section 33.1-24-08-31 and 33.1-24-08-32 that indicate a release may have occurred unless:
 - a. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result;
 - b. The leak is contained in the secondary containment and:

- (1) Except as provided for in paragraph (4) of subdivision b of subsection 7 of section 33.1-24-08-33, any liquid in the interstitial space not used as part of the interstitial monitoring method (for example, brine filled) is immediately removed; and
 - (2) Any defective system equipment or component is immediately repaired or replaced.
- c. In the case of inventory control, described in subsection 1 of section 33.1-24-08-33, a second month of data does not confirm the initial result or the investigation determines no release has occurred; or
 - d. The alarm was investigated and determined to be a non-release event (for example, from a power surge or caused by filling the tank during release detection testing).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-41. Investigation due to offsite impacts. When required by the department, owners and operators of underground storage tank systems must follow the procedures in section 33.1-24-08-42 to determine if the underground storage tank system is the source of offsite impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that has been observed by the department or brought to its attention by another party.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-42. Release investigation and confirmation steps. Unless corrective action is initiated in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under section 33.1-24-08-40 within seven days, or another reasonable time period specified by the department, using either the following steps or another procedure approved by the department:

- 1. **System test.** Owners and operators must conduct tests (according to the requirements for tightness testing in subsection 3 of section 33.1-24-08-33 and subsection 2 of section 33.1-24-08-34 or, as appropriate, secondary containment testing described in subsection 4 of section 33.1-24-08-23).
 - a. The test must determine whether:
 - (1) A leak exists in that portion of the tank that routinely contains product, or the attached delivery piping; or
 - (2) A breach of either wall of the secondary containment has occurred.

- b. If the system test confirms a leak into the interstice or a release, owners and operators must repair, replace, upgrade, or close the underground storage tank system, and begin corrective action in accordance with sections 33.1-24-08-50 through 33.1-24-08-57 if the test results for the system, tank, or delivery piping indicate that a release exists.
- c. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a release exists and if environmental contamination is not the basis for suspecting a release.
- d. Owners and operators must conduct a site check as described in subsection 2 if the test results for the system, tank, and delivery piping do not indicate that a release exists but environmental contamination is the basis for suspecting a release.

2. **Site check.** Owners and operators must measure for the presence of a release where contamination is most likely to be present at the underground storage tank site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of groundwater, and other factors appropriate for identifying the presence and source of the release.

- a. If the test results for the excavation zone or the underground storage tank site indicate that a release has occurred, owners and operators must begin corrective action in accordance with sections 33.1-24-08-50 through 33.1-24-08-57.
- b. If the test results for the excavation zone or the underground storage tank site do not indicate that a release has occurred, further investigation is not required.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-43. Reporting and cleanup of spills and overfills.

- 1. Owners and operators of underground storage tank systems must contain and immediately clean up a spill or overfill and report to the department within twenty-four hours, or another reasonable time period specified by the department, and begin corrective action in accordance with sections 33.1-24-08-50 through 33.1-24-08-57 in the following cases:
 - a. Spill or overfill of petroleum that results in a release to the environment that exceeds twenty-five gallons [94.63 liters] or another reasonable amount specified by the department, or that causes a sheen on nearby surface water; and

- b. Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under the Comprehensive Environmental Response, Compensation, and Liability Act [40 CFR 302].
2. Owners and operators of underground storage tank systems must contain and immediately clean up a spill or overfill of petroleum that is less than twenty-five gallons [94.63 liters] or another reasonable amount specified by the department, and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within twenty-four hours, or another reasonable time period established by the department, owners and operators must immediately notify the department.

(NOTE: A release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within twenty-four hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under title III of the Superfund Amendments and Reauthorization Act of 1986.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-44. Unattended cardtrol facilities. A facility that normally has no employee or other responsible person onsite, or is open to dispense fuel at times when no employee or responsible person is onsite, shall have a sign posted in a conspicuous place, giving the name and telephone number of the facility owner, operator, or local emergency responders, and an emergency shutoff device, if the facility dispenses fuel.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-45. Operator designations and requirements for operator training. All owners and operators of UST systems must ensure they have designated class A, class B, and class C operators who meet the requirements of sections 33.1-24-08-45 through 33.1-24-08-48. Owners or operators of underground storage tank systems must designate a class A, class B, and class C operator for each tank system, except unattended cardtrol facilities which are not required to designate a class C operator. Either a class A, or class B, or class C operator must be present onsite during the operation of the tank system, except unattended cardtrol facilities which must have a posted sign in accordance with section 33.1-24-08-44.

Separate individuals may be designated for each class of operator or an individual may be designated to more than one operator class. An individual who is designated to more than one operator class must be trained in each operator class for which the individual is designated. Owners or operators must notify the department (for example, written or electronic notice: name of owner, business location address, city, state, zip code, and telephone number), and provide the name of the designated class A and class B operator for each underground storage tank

facility owned. The owner or operator shall notify the department of any change of designated class A or class B operators within thirty days of the change. Documentation identifying the designated class C operators shall be maintained at each facility.

1. The class A operator has primary responsibility to operate and maintain the underground storage tank system. The class A operator's responsibilities include managing resources and personnel to achieve and maintain compliance with regulatory requirements.

Each designated class A operator must either be trained in accordance with subdivisions a and b of subsection 1 of this section or pass a comparable examination in accordance with subsection 5 of this section.

- a. At a minimum, the training program for the class A operator must provide general knowledge of the requirements in this paragraph. At a minimum, the training must teach the class A operators, as applicable, about the purpose, methods, and function of:

- (1) Spill and overfill prevention;
- (2) Release detection;
- (3) Corrosion protection;
- (4) Emergency response;
- (5) Product and equipment compatibility and demonstration;
- (6) Financial responsibility;
- (7) Notification and storage tank registration;
- (8) Temporary and permanent closure;
- (9) Related reporting, recordkeeping, testing, and inspections;
- (10) Environmental and regulatory consequences of releases; and
- (11) Training requirements for class B and class C operators.

- b. At a minimum, the training program must evaluate Class A operators to determine these individuals have the knowledge and skills to make informed decisions regarding compliance and determine whether appropriate individuals are fulfilling the operation, maintenance, and recordkeeping requirements for UST systems in accordance with subdivision a, subsection 1.

2. The class B operator has primary responsibility for implementing the routine daily aspects of operation, maintenance, and recordkeeping for the underground storage tank system.

Each designated class B operator must either receive training in accordance with subdivisions a and b or pass a comparable examination in accordance with subsection 5 of this section.

a. At a minimum, the training program for the class B operator must cover either: general requirements that encompass all regulatory requirements and typical equipment used at UST facilities; or site-specific requirements which address only the regulatory requirements and equipment specific to the facility. At a minimum, the training program for class B operators must teach the class B operator, as applicable, about the purpose, methods, and function of:

(1) Operation and maintenance;

(2) Spill and overflow prevention;

(3) Release detection and related reporting;

(4) Corrosion protection;

(5) Emergency response;

(6) Product and equipment compatibility and demonstration;

(7) Reporting, recordkeeping, testing, and inspections;

(8) Environmental and regulatory consequences of releases; and

(9) Training requirements for class C operators.

b. At a minimum, the training program must evaluate class B operators to determine these individuals have the knowledge and skills to implement applicable UST regulatory requirements in the field on the components of typical UST systems or, as applicable, site-specific equipment used at an UST facility in accordance with subdivision a of subsection 2.

c. The class B operator shall ensure the performance and documentation of the onsite operator inspection in accordance with section 33.1-24-08-49.

3. Each designated class C operator must either: be trained by a class A or class B operator in accordance with subdivisions a and b; complete a training program in accordance with subdivisions a and b; or pass a comparable examination, in accordance with subsection 5.

a. At a minimum, the training program for the class C operator must teach the class C operators to take appropriate actions (including notifying appropriate authorities) in response to emergencies or alarms caused by spills or releases resulting from the operation of the UST system.

- b. At a minimum, the training program must evaluate class C operators to determine these individuals have the knowledge and skills to take appropriate action (including notifying appropriate authorities) in response to emergencies or alarms caused by spills or releases from an underground storage tank system
4. Training program. Any training program must meet the minimum requirements of this section and include an evaluation through testing, a practical demonstration, or another approach acceptable to the department.
5. Comparable examination. A comparable examination must, at a minimum, test the knowledge of the class A, class B, or class C operators in accordance with the requirements of subsections 1, 2 or 3 of this section, as applicable.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-46. Timing of operator training and reciprocity. Operator training must evaluate operator knowledge in the areas described for each class of operator in accordance with subsections 1, 2, and 3 of section 33.1-24-08-45.

1. By August 8, 2012, the owner or operator of an underground storage tank system regulated by this chapter, except those excluded by regulation in subsection 2 of section 33.1-24-08-01, and those deferred by regulation in subsection 3 of section 33.1-24-08-01, shall have trained class A, class B, and class C operators for each facility owned.
2. After August 8, 2012, class A and class B operators must be trained within thirty days or another reasonable period specified by the department, after assuming operation and maintenance responsibilities of the underground storage tank system. Class C operators must be trained before assuming responsibility for responding to emergencies.
3. Training of underground storage tank system operators shall be performed by the department or by a third-party trainer approved by the department, except that a trained class A, or class B, operator may train a class C operator.
4. Training reciprocity. The department may accept operator training certification verification from other states that have equivalent operator training requirements.

(NOTE: The following alternate third-party methods may be used to comply with this section: a certificate issued by a nationally recognized underground storage tank operator examination approved by the department; or written proof of successful completion of an equivalent operator training and testing program that has received prior approval from the department.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-47. Operator retraining. Class A and class B operators of UST systems determined by the department to be out of compliance must complete a training program or comparable examination in accordance with requirements in section 33.1-24-18-45. The training program or comparable examination must be developed or administered by an independent organization, the department, or a recognized authority. At a minimum, the training must cover the area(s) determined to be out of compliance. UST system owners and operators must ensure class A and class B operators are retrained pursuant to this section no later than 30 days from the date the department determines the facility is out of compliance except in one of the following situations:

1. Class A and class B operators take annual refresher training. Refresher training for class A and class B operators must cover all applicable requirements in section 33.1-24-18-45, or
2. The department, at its discretion, waives this retraining requirement for either the class A or class B operator or both..

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-48. Operator Training Documentation. Owners and operators of underground storage tank systems must maintain a list of designated class A, class B, and class C operators and maintain records verifying that training and retraining, as applicable, have been completed, in accordance with section 33.1-24-18-24 as follows:

1. The list must:
 - a. Identify all class A, class B, and class C operators currently designated for the facility; and
 - b. Include names, class of operator trained, date assumed duties, date each completed initial training, and any retraining.
2. Records verifying completion of training or retraining must be a paper or electronic record for class A, class B, and class C operators. The records, at a minimum, must identify name of trainee, date trained, operator training class completed, and list the name of the trainer or examiner and the training company name, address, and telephone number. Owners and operators must maintain these records for as long as class A, class B, and class C operators are designated. The following requirements also apply to the following types of training:
 - a. Records from classroom or field training programs (including class C operator training provided by the class A or class B operator) or a comparable examination must, at a minimum, be signed by the trainer or examiner;
 - b. Records from computer based training must, at a minimum, indicate the

name of the training program and web address, if Internet based; and

- c. Records of retraining must include those areas on which the class A or class B operator has been retrained.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-50. General release response and corrective action for underground storage tank systems containing petroleum or hazardous substances. Owners and operators of petroleum or hazardous substance underground storage tank systems must, in response to a confirmed release from the underground storage tank system, comply with the requirements of this section except for underground storage tanks excluded under subsection 2 of section 33.1-24-08-01 and underground storage tank systems subject to the hazardous waste provisions of North Dakota Century Code chapter 23.1-04.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-51. Initial response. Upon confirmation of a release in accordance with section 33.1-24-08-42 or after a release from the underground storage tank system is identified in any other manner, owners and operators must perform the following initial response actions within twenty-four hours of a release or within another reasonable period of time determined by the department:

1. Report the release to the department (for example, by telephone or electronic mail.
2. Take immediate action to prevent any further release of the regulated substance into the environment; and
3. Identify and mitigate fire, explosion, and vapor hazards.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-52. Initial abatement measures and site check.

1. Unless directed to do otherwise by the department, owners and operators must perform the following abatement measures:
 - a. Remove as much of the regulated substance from the underground storage tank system as is necessary to prevent further release to the environment;
 - b. Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and groundwater;

- c. Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the underground storage tank excavation zone and entered into subsurface structures (such as sewers or basements);
 - d. Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable state and local requirements;
 - e. Measure for the presence of a release where contamination is most likely to be present at the underground storage tank site, unless the presence and source of the release have been confirmed in accordance with the site check required by subsection 2 of section 33.1-24-08-42 or the closure site assessment of subsection 1 of section 33.1-24-08-62. In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to groundwater and other factors as appropriate for identifying the presence and source of the release; and
 - f. Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with section 33.1-24-08-54.
2. Within twenty days after release confirmation, or within another reasonable period of time determined by the department, owners and operators must submit a report to the department summarizing the initial abatement steps taken under subsection 1 and any resulting information or data.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-53. Initial site characterization.

1. Unless directed to do otherwise by the department, owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in sections 33.1-24-08-50 and 33.1-24-08-51. This information must include, but is not necessarily limited to, the following:
 - a. Data on the nature and estimated quantity of release;
 - b. Data from available sources or site investigations, or both, concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological

conditions, and land use;

c. Results of the site check required under subdivision e of subsection 1 of section 33.1-24-08-52; and

d. Results of the free product investigations required under subdivision f of subsection 1 of section 33.1-24-08-52, to be used by owners and operators to determine whether free product must be recovered under section 33.1-24-08-54.

2. Within forty-five days of release confirmation or another reasonable period of time determined by the department, owners and operators must submit the information collected in compliance with subsection 1 to the department in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-54. Free product removal. At sites where investigations under subdivision f of subsection 1 of section 33.1-24-08-52 indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the department while continuing, as necessary, any actions initiated under sections 33.1-24-08-51 through section 33.1-24-08-53, or preparing for actions required under sections 33.1-24-08-55 and 33.1-24-08-56. In meeting the requirements of this section, owners and operators must:

1. Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, state and federal regulations;

2. Use abatement of free product migration as a minimum objective for the design of the free product removal systems;

3. Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

4. Unless directed to do otherwise by the department, prepare and submit to the department, within forty-five days after confirming a release, a free product removal report that provides at least the following information:

a. The name of the persons responsible for implementing the free product removal measures;

b. The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

- c. The type of free product recovery system used;
- d. Whether any discharge will take place onsite or offsite during the recovery operation and where this discharge will be located;
- e. The type of treatment applied to, and the effluent quality expected from, any discharge;
- f. The steps that have been or are being taken to obtain necessary permits for any discharge; and
- g. The disposition of the recovered free product.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-55. Investigations for soil and groundwater cleanup.

1. In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the groundwater, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:
 - a. There is evidence that groundwater wells have been affected by the release (for example, as found during release confirmation or previous corrective action measures);
 - b. Free product is found to need recovery in compliance with section 33.1-24-08-54;
 - c. There is evidence that contaminated soils may be in contact with groundwater (for example, as found during conduct of the initial response measures or investigations required under sections 33.1-24-08-50 through 33.1-24-08-54); and
 - d. The department requests an investigation, based on the potential effects of contaminated soil or groundwater on nearby surface water and groundwater resources.
2. Owners and operators must submit the information collected under subsection 1 as soon as practicable or in accordance with a schedule established by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

33.1-24-08-56. Corrective action plan.

1. At any point after reviewing the information submitted in compliance with sections 33.1-24-08-51 through 33.1-24-08-53, the department may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and groundwater. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the department. Alternatively, owners and operators may, after fulfilling the requirements of sections 33.1-24-08-51 through 33.1-24-08-53, choose to submit a corrective action plan for responding to contaminated soil and groundwater. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the department, and must modify their plan as necessary to meet this standard.

2. The department will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the department should consider the following factors as appropriate:
 - a. The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;
 - b. The hydrogeologic characteristics of the facility and the surrounding area;
 - c. The proximity, quality, and current and future uses of nearby surface water and groundwater;
 - d. The potential effects of residual contamination on nearby surface water and groundwater;
 - e. An exposure assessment; and
 - f. Any information assembled in compliance with sections 33.1-24-08-50 through 33.1-24-08-57.

3. Upon approval of the corrective action plan or as directed by the department, owners and operators must implement the plan, including modifications to the plan made by the department. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the department.

4. Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and groundwater before the corrective action plan is approved provided that they:

- a. Notify the department of their intention to begin cleanup;
- b. Comply with any conditions imposed by the department, including halting cleanup or mitigating adverse consequences from cleanup activities; and
- c. Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the department for approval.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-57. Public participation.

1. For each confirmed release that requires a corrective action plan, the department must provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public announcements, publication in a state register, letters to individual households, or personal contacts by field staff.
2. The department must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.
3. Before approving a corrective action plan, the department may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.
4. The department must give public notice that complies with subsection 1 if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the department.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-05-58. [Reserved]

33.1-24-05-59. [Reserved]

33.1-24-08-60. Temporary closure.

1. When an underground storage tank system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with section 33.1-24-08-21, and any release detection in accordance with sections 33.1-24-08-30 through 33.1-24-08-35 and sections 33.1-24-08-70 through 33.1-24-72. Sections 33.1-24-08-40 through 33.1-24-08-43 and sections 33.1-24-08-50 through 33.1-24-08-57 must be complied with if a release is

suspected or confirmed. However, release detection and release detection operation and maintenance testing and inspections in sections 33.1-24-08-20 through 33.1-24-08-26 and sections 33.1-24-08-30 through 33.1-24-35 are not required as long as the underground storage tank system is empty. The underground storage tank system is empty when all materials have been removed using commonly employed practices so that no more than two and five-tenths centimeters [1 inch] of residue, or three-tenths of one percent by weight of the total capacity of the underground storage tank system, remain in the system. In addition, spill and overfill operation and maintenance testing and inspections in sections 33.1-24-08-20 through 33.1-24-08-26 are not required.

2. When an underground storage tank system is temporarily closed for three months or more, owners and operators must also comply with the following requirements:
 - a. Leave vent lines open and functioning; and
 - b. Cap and secure all other lines, pumps, manways, and ancillary equipment.

3. When an underground storage tank system is temporarily closed for more than twelve months, owners and operators must permanently close the underground storage tank system if it does not meet either performance standards in section 33.1-24-08-10 for new underground storage tank systems or the upgrading requirements in section 33.1-24-08-11, except that the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard underground storage tank systems at the end of this twelve-month period in accordance with sections 33.1-24-08-61 through 33.1-24-08-64, unless the department provides an extension of the twelve-month temporary closure period. Owners and operators must complete a site assessment in accordance with section 33.1-24-08-62 before such an extension can be applied for.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-61. Permanent closure and changes in service.

1. At least thirty days before beginning either permanent closure or a change in service under subsections 2 and 3, or within another reasonable time period determined by the department, owners and operators must notify the department of their intent to permanently close or make the change in service, unless such action is in response to corrective action. The required assessment of the excavation zone under section 33.1-24-08-62 must be performed after notifying the department but before completion of the permanent closure or a change in service.

2. To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must: be removed from the ground, filled with an inert solid material

or closed in place in a manner approved by the department.

3. Continued use of an underground storage tank system to store a nonregulated substance is considered a change in service. Before a change in service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with section 33.1-24-08-62.

(NOTE: The following cleaning and closure procedures may be used to comply with this section: American Petroleum Institute Recommended Practice RP 1604, "Closure of Underground Petroleum Storage Tanks"; American Petroleum Institute Standard 2015, "Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry From Decommissioning Through Recommissioning"; American Petroleum Institute Recommended Practice 2016, "Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks"; American Petroleum Institute Recommended Practice RP 1631, "Interior Lining and Periodic Inspection of Underground Storage Tanks", may be used as guidance for compliance with this section; National Fire Protection Association Standard 326, "Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair"; and The National Institute for Occupational Safety and Health Publication 80-106, "Criteria for a Recommended Standard...Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.)

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-62. Assessing the site at closure or change in service.

1. Before permanent closure or a change in service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the underground storage tank site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in subsections 5 and 6 of section 33.1-24-08-33 is operating in accordance with the requirements in section 33.1-24-08-33 at the time of closure, and indicates no release has occurred.
2. If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered under subsection 1, or by any other manner, owners and operators must begin corrective action in accordance with sections 33.1-24-08-50 through 33.1-24-08-57.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-63. Applicability to previously closed underground storage tank systems. When directed by the department, the owner and operator of an underground storage tank system permanently closed before December 22, 1988, must assess the excavation zone and close the underground storage tank system in accordance with sections 33.1-24-08-60 through 33.1-24-08-64 if releases from the underground storage tank may, in the judgment of the department, pose a current or potential threat to human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-64. Closure records. Owners and operators must maintain records in accordance with section 33.1-24-08-24 that are capable of demonstrating compliance with closure requirements under sections 33.1-24-08-60 through 33.1-24-08-64. The results of the excavation zone assessment required in section 33.1-24-08-62 must be maintained for at least three years after completion of permanent closure or change in service in one of the following ways:

1. By the owners and operators who took the underground storage tank system out of service;
2. By the current owners and operators of the underground storage tank system site;
or
3. By mailing these records to the department if they cannot be maintained at the closed facility.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-65. [Reserved]

33.1-24-08-66. [Reserved]

33.1-24-08-67. [Reserved]

33.1-24-08-68. [Reserved]

33.1-24-08-69. [Reserved]

33.1-24-08-70. UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems Definitions. For purposes of this section, the following definitions apply:

1. “Airport hydrant fuel distribution system” (also called airport hydrant system) means an UST system which fuels aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants (fill stands). The airport hydrant system begins where fuel enters one or more tanks from an external source such as a pipeline, barge, rail car, or other motor fuel carrier.

2. “Field-constructed tank” means a tank constructed in the field. For example, a tank constructed of concrete that is poured in the field, or a steel or fiberglass tank primarily fabricated in the field is considered field-constructed.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-71. General requirements.

1. Implementation of requirements. Owners and operators must comply with the requirements of this chapter for UST systems with field-constructed tanks and airport hydrant systems as follows:

- a. For UST systems installed on or before April 1, 2018 the requirements are effective according to the following schedule:

<u>Requirement</u>	<u>Effective Date</u>
<u>Upgrading UST systems; general operating requirements; and operator training</u>	<u>April 1, 2021</u>
<u>Release detection</u>	<u>April 1, 2021</u>
<u>Release reporting, response, and investigation; closure; financial responsibility and notification (except as provided in subsection 2 of this section)</u>	<u>April 1, 2018</u>

- b. For UST systems installed after April 1, 2018, the requirements apply at installation.
2. Not later than April 1, 2021, all owners of previously deferred UST systems must submit a one-time notice of tank system existence to the department, using the state form in Appendix I, in accordance with subsection 3 of section 33.1-24-08-12. Owners and operators of UST systems in use as of April 1, 2018 must demonstrate financial responsibility at the time of submission of the notification form.
3. Except as provided in section 33.1-24-08-72, owners and operators must comply with the requirements of sections 32-24-08-01 through 33.1-24-08-106.
4. In addition to the codes of practice listed in section 33.1-24-08-10, owners and operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing airport hydrant systems and UST systems with field-constructed tanks.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-72. Additions, exceptions, and alternatives for UST systems with field-constructed tanks and airport hydrant systems.

1. Exception to piping secondary containment requirements. Owners and operators may use single walled piping when installing or replacing piping associated with UST systems with field-constructed tanks greater than 50,000 gallons and piping associated with airport hydrant systems. Piping associated with UST systems with field-constructed tanks less than or equal to 50,000 gallons not part of an airport hydrant system must meet the secondary containment requirement when installed or replaced.

2. Upgrade requirements. Not later than April 1, 2021, airport hydrant systems and UST systems with field-constructed tanks where installation commenced on or before April 1, 2018 must meet the following requirements or be permanently closed pursuant to sections 33.1-24-08-60 through 34-24-08-64.
 - a. Corrosion protection. UST system components in contact with the ground that routinely contain regulated substances must meet one of the following:
 - (1) Except as provided in subsection 1, the new UST system performance standards for tanks at subsection 1 of section 33.1-24-08-10 and for piping at subsection 2 of section 33.1-24-08-10; or
 - (2) Be constructed of metal and cathodically protected according to a code of practice developed by a nationally recognized association or independent testing laboratory and meets the following:
 - (a) Cathodic protection must meet the requirements of paragraphs (2) through (4) of subdivision b of subsection 1 of section 33.1-24-08-10 for tanks, and paragraphs (2) through (4) of subdivision b of subsection 2 of section 33.1-24-08-10 for piping.
 - (b) Tanks greater than 10 years old without cathodic protection must be assessed to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment must be by internal inspection or another method determined by the department to adequately assess the tank for structural soundness and corrosion holes.

(NOTE: the following codes of practice may be used to comply with this section: NACE International Standard Practice SP 0285, "External Control of Underground Storage Tank Systems by Cathodic Protection"; NACE International Standard Practice SP 0169, "Control of External Corrosion on

Underground or Submerged Metallic Piping Systems”; National Leak Prevention Association Standard 631, Chapter C, “Internal Inspection of Steel Tanks for Retrofit of Cathodic Protection”; or American Society for Testing and Materials Standard G158, “Standard Guide for Three Methods of Assessing Buried Steel Tanks.”)

- b. Spill and overflow prevention equipment. To prevent spilling and overflowing associated with product transfer to the UST system, all UST systems with field-constructed tanks and airport hydrant systems must comply with new UST system spill and overflow prevention equipment requirements specified in subsection 3 of section 33.1-24-08-10.
3. Walkthrough inspections. In addition to the walkthrough inspection requirements in section 33.1-24-08-26, owners and operators must inspect the following additional areas for airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (see 29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to subsection 2 of section 33.1-24-08-26.
 - a. Hydrant pits – visually check for any damage; remove any liquid or debris; and check for any leaks, and
 - b. Hydrant piping vaults – check for any hydrant piping leaks.
4. Release detection. Owners and operators of UST systems with field-constructed tanks and airport hydrant systems must begin meeting the release detection requirements described in sections 33.1-24-08-70 through 33.1-24-08-72 not later than April 1, 2021.
 - a. Methods of release detection for field-constructed tanks. Owners and operators of field-constructed tanks with a capacity less than or equal to 50,000 gallons must meet the release detection requirements in sections 33.1-24-08-30 through 33.1-24-08-35. Owners and operators of field-constructed tanks with a capacity greater than 50,000 gallons must meet either the requirements in sections 33.1-24-08-30 through 33.1-24-08-35 (except subsections 5 and 6 of section 33.1-24-08-33 must be combined with inventory control as stated below) of this chapter or use one or a combination of the following alternative methods of release detection:
 - (1) Conduct an annual tank tightness test that can detect a 0.5 gallon per hour leak rate;
 - (2) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to one gallon per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every three years;

- (3) Use an automatic tank gauging system to perform release detection at least every 30 days that can detect a leak rate less than or equal to two gallons per hour. This method must be combined with a tank tightness test that can detect a 0.2 gallon per hour leak rate performed at least every two years;
- (4) Perform vapor monitoring (conducted in accordance with subsection 5 of section 33.1-24-08-33 for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;
- (5) Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and
 - (a) Perform a tank tightness test that can detect a 0.5 gallon per hour leak rate at least every two years; or
 - (b) Perform vapor monitoring or groundwater monitoring (conducted in accordance with subsections 5 and 6 of section 33.1-24-08-33, respectively, for the stored regulated substance) at least every 30 days; or
- (6) Another method approved by the department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (1) through (5). In comparing methods, the department shall consider the size of release that the method can detect and the frequency and reliability of detection.

b. Methods of release detection for piping. Owners and operators of underground piping associated with field-constructed tanks less than or equal to 50,000 gallons must meet the release detection requirements in sections 33.1-24-08-30 through 33.1-24-08-35. Owners and operators of underground piping associated with airport hydrant systems and field-constructed tanks greater than 50,000 gallons must follow either the requirements in sections 33.1-24-08-30 through 33.1-24-08-35 (except subsections 5 and 6 of section 33.1-24-08-33 must be combined with inventory control as stated below) of this chapter or use one or a combination of the following alternative methods of release detection:

- (1) Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the table below.

<u>Maximum Leak Detection Rate Per Test Section Volume</u>		
<u>Test Section Volume (Gallons)</u>	<u>Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)</u>	<u>Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)</u>
<u>< 50,000</u>	<u>1.0</u>	<u>0.5</u>
<u>≥ 50,000 to < 75,000</u>	<u>1.5</u>	<u>0.75</u>
<u>≥ 75,000 to < 100,000</u>	<u>2.0</u>	<u>1.0</u>
<u>≥ 100,000</u>	<u>3.0</u>	<u>1.5</u>

Piping segment volumes ≥ 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate up to 6.0 gallons per hour according to the following schedule:

<u>Phase In For Piping Segments ≥ 100,000 Gallons In Volume</u>	
<u>First test</u>	<u>Not later than April 1, 2021 (may use up to 6.0 gph leak rate)</u>
<u>Second test</u>	<u>Between April 1, 2021 and April 1, 2024 (may use up to 6.0 gph leak rate)</u>
<u>Third test</u>	<u>Between April 1, 2024 and April 1, 2025 (must use 3.0 gph for leak rate)</u>
<u>Subsequent tests</u>	<u>After April 1, 2025, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume table above</u>

- (2) Perform vapor monitoring (conducted in accordance with subsection 5 of section 33.1-24-08-33 for a tracer compound placed in the tank system) capable of detecting a 0.1 gallon per hour leak rate at least every two years;
- (3) Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5 percent of flow-through; and
 - (a) Perform a line tightness test (conducted in accordance with paragraph (1), subdivision b of subsection 4 of this section using the leak rates for the semiannual test) at least every two years; or
 - (b) Perform vapor monitoring or groundwater monitoring (conducted in accordance with subsections 5 and 6 of section 33.1-24-08-33, respectively, for the stored regulated substance) at least every 30 days; or

- (4) Another method approved by the department if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (1) through (3). In comparing methods, the department shall consider the size of release that the method can detect and the frequency and reliability of detection.
- c. Recordkeeping for release detection. Owners and operators must maintain release detection records according to the recordkeeping requirements in section 33.1-24-08-35.
5. Applicability of closure requirements to previously closed UST systems. When directed by the department, the owner and operator of an UST system with field-constructed tanks or airport hydrant system permanently closed before April 1, 2018 must assess the excavation zone and close the UST system in accordance with sections 33.1-24-08-60 through 33.1-24-08-64 if releases from the UST may, in the judgment of the department, pose a current or potential threat to human health and the environment.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-73. [Reserved]

33.1-24-08-74. [Reserved]

33.1-24-08-75. [Reserved]

33.1-24-08-76. [Reserved]

33.1-24-08-77. [Reserved]

33.1-24-08-78. [Reserved]

33.1-24-08-79. [Reserved]

33.1-24-08-80. Applicability (financial responsibility).

1. Sections 33.1-24-08-80 through 33.1-24-08-106 apply to owners and operators of all petroleum underground storage tank systems except as otherwise provided.
2. Owners and operators of petroleum underground storage tank systems are subject to these requirements in accordance with section 33.1-24-08-81.
3. State and federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are exempt from the requirements of

sections 33.1-24-08-80 through 33.1-24-08-106.

4. The requirements of sections 33.1-24-08-80 through 33.1-24-08-106 do not apply to owners or operators of any underground storage tank system described in subsections 2 and 3 of section 33.1-24-08-01.
5. If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-81. Financial responsibility compliance dates. Owners of petroleum underground storage tanks shall immediately comply with the requirements of sections 33.1-24-08-80 through 33.1-24-08-106.

Owners of previously deferred systems shall comply with the requirements of this section according to the schedule in subsection 1 of section 33.1-24-08-71.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-82. Definitions (financial responsibility). When used in sections 33.1-24-08-80 through 33.1-24-08-106, the following terms have the meanings given below:

1. "Accidental release" means any sudden or nonsudden release of petroleum arising from operating an underground storage tank that results in a need for corrective action or compensation for bodily injury or property damage, or both, neither expected nor intended by the tank owner or operator.
2. "Bodily injury" shall have the meaning given to this term by applicable state law; however, this term does not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.
3. "Chief financial officer", in the case of local government owners and operators, means the individual with overall authority and responsibility for the collection, disbursement, and use of funds by the local government.
4. "Controlling interest" means direct ownership of at least fifty percent of the voting stock of another entity.
5. "Department means the department of environmental quality.
6. "Financial reporting year" means the latest consecutive twelve-month period for

which any of the following reports used to support a financial test is prepared:

- a. A 10-K report submitted to the securities and exchange commission;
- b. An annual report of tangible net worth submitted to dun and bradstreet; or
- c. Annual reports submitted to the energy information administration or the rural utilities service..

“Financial reporting year” may thus comprise a fiscal-year or a calendar-year period.

7. “Legal defense cost” is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought:

- a. By the Environmental Protection Agency or a state to require corrective action or to recover the costs of corrective action;
- b. By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or
- c. By any person to enforce the terms of a financial assurance mechanism.

8. “Local government” has the meaning given this term by applicable state law. The term is generally intended to include:

- a. Counties, municipalities, townships, separately chartered and operated special districts (including local government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by state charter or constitution; and
- b. Special districts and independent school districts established by counties, municipalities, townships, and other general purpose governments to provide essential services.

9. “Occurrence” means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank.

(NOTE: This definition is intended to assist in the understanding of these rules and is not intended either to limit the meaning of “occurrence” in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of “occurrence”.)

10. “Owner or operator”, when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

11. “Petroleum marketing facilities” include all facilities at which petroleum is produced

or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.

12. “Property damage” has the meaning given this term by applicable state law. This term does not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.
13. “Provider of financial assurance” means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in sections 33.1-24-08-85 through 33.1-24-08-97, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.
14. “Substantial business relationship” means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued incident to that relationship if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.
15. “Substantial governmental relationship” means the extent of a governmental relationship necessary under applicable state law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is insured “incident to that relationship” if it arises from a clear commonality of interest in the event of an underground storage tank release such as coterminous boundaries, overlapping constituencies, common groundwater aquifer, or other relationship other than monetary compensation that provides a motivation for the guarantor to provide a guarantee.
16. “Tangible net worth” means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, “assets” means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.
17. “Termination” under subdivisions a and b of subsection 2 of section 33.1-24-08-87 means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-83. Amount and scope of required financial responsibility.

1. Owners or operators of petroleum underground storage tanks must demonstrate

financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

- a. For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than ten thousand gallons [37854 liters] of petroleum per month based on annual throughput for the previous calendar year, one million dollars; and
 - b. For all other owners or operators of petroleum underground storage tanks; five hundred thousand dollars.
2. Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:
- a. For owners or operators of one to one hundred petroleum underground storage tanks, one million dollars; and
 - b. For owners or operators of one hundred one or more petroleum underground storage tanks, two million dollars.
3. For the purposes of subsections 2 and 6 only, “a petroleum underground storage tank” means a single containment unit and does not mean combinations of single containment units.
4. Except as provided in subsection 5, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:
- a. Taking corrective action;
 - b. Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or
 - c. Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in subsections 1 and 2.
5. If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required must be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

6. Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds one hundred, the owner or operator shall demonstrate financial responsibility in the amount of at least two million dollars of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least two million dollars of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.
7. The amounts of assurance required under this section exclude legal defense costs.
8. The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-84. Allowable mechanisms and combinations of mechanisms.

1. Subject to the limitations of subsections 2 and 3, an owner or operator, including a local government owner or operator may use any one or combination of the mechanisms listed in sections 33.1-24-08-85 through 33.1-24-08-93 to demonstrate financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106 for one or more underground storage tanks.
2. A local government owner or operator may use any one or combination of the mechanisms listed in sections 33.1-24-08-94 through 33.1-24-08-97 to demonstrate financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106 for one or more underground storage tanks.
3. An owner or operator may use a guarantee under section 33.1-24-08-86 or surety bond under section 33.1-24-08-88 to establish financial responsibility only if the attorney general has submitted a written statement to the department that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in the state.
4. An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this chapter, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

33.1-24-08-85. Financial test of self-insurance.

1. An owner or operator, or guarantor, or both, may satisfy the requirements of section 33.1-24-08-83 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, or guarantor, or both, must meet the criteria of subsection 2 or 3 based on yearend financial statements for the latest completed fiscal year.

2. The following apply:
 - a. The owner or operator, or guarantor, or both, must have a tangible net worth of at least ten times:
 - (1) The total of the applicable aggregate amount required by section 33.1-24-08-83, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to the department;
 - (2) The sum of the corrective action cost estimates, the current closure and postclosure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to the department under sections 33.1-24-05-58, 33.1-24-05-77, and 33.1-24-05-79; and
 - (3) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to the department under chapter 33.1-25-01.
 - b. The owner or operator, or guarantor, or both, must have a tangible net worth of at least ten million dollars.
 - c. The owner or operator, or guarantor, or both, must have a letter signed by the chief financial officer worded as specified in subsection 4.
 - d. The owner or operator, or guarantor, or both, must either:
 - (1) File financial statements annually with the United States securities and exchange commission, the energy information administration, or the rural utilities service; or
 - (2) Report annually the firm's tangible net worth to dun and bradstreet, and dun and bradstreet must have assigned the firm a financial strength rating of 4A or 5A.
 - e. The firm's yearend financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going

concern” qualification.

3. The following apply:

- a. The owner or operator, or guarantor, or both, must meet the financial test requirements of subdivision a of subsection 6 of section 33.1-24-05-79, substituting the appropriate amounts specified in subdivisions a and b of subsection 2 of section 33.1-24-08-83 for the “amount of liability coverage” each time specified in that section;
- b. The fiscal yearend financial statements of the owner or operator, or guarantor, or both, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination;
- c. The firm's yearend financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a “going concern” qualification;
- d. The owner or operator, or guarantor, or both, must have a letter signed by the chief financial officer, worded as specified in subsection 4; and
- e. If the financial statements of the owner or operator, or guarantor, or both, are not submitted annually to the United States securities and exchange commission, the energy information administration or the rural utilities service, the owner or operator, or guarantor, or both, must obtain a special report by an independent certified public accountant stating that:
 - (1) The certified public accountant has compared the data that the letter from the chief financial officer specifies as having been derived from the latest yearend financial statements of the owner or operator, or guarantor, or both, with the amounts in such financial statements; and
 - (2) In connection with that comparison, no matters came to the certified public accountant's attention which caused the certified public accountants to believe that the specified data should be adjusted.

4. To demonstrate that it meets the financial test under subsection 2 or 3, the chief financial officer of the owner or operator, or guarantor, must sign, within one hundred twenty days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or

operator, or guarantor]. This letter is in support of the use of [insert: “the financial test of self-insurance”, and/or “guarantee”] to demonstrate financial responsibility for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage”] caused by [insert: “sudden accidental releases”; terms of the policy, and/or “nonsudden accidental releases” or “accidental releases”] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test by this [insert: “owner or operator”, and/or “guarantor”]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to state requirements.]

A [insert: “financial test”, and/or “guarantee”] is also used by this [insert: “owner or operator”, or “guarantor”] to demonstrate evidence of financial responsibility in the following amounts under other environmental protection agency regulations or state programs authorized by the environmental protection agency under 40 CFR Parts 271 and 145:

<u>EPA Regulations</u>	<u>Amount</u>
<u>Closure [“264.143 and 265.143]</u>	<u>\$</u>
<u>Post-Closure Care [“264.145 and 265.145]</u>	<u>\$</u>
<u>Liability Coverage [“264.147 and 265.147]</u>	<u>\$</u>
<u>Corrective Action [“264.101(b)]</u>	<u>\$</u>
<u>Plugging and Abandonment [“144.63]</u>	<u>\$</u>
<u>Closure</u>	<u>\$</u>
<u>Post-Closure Care</u>	<u>\$</u>
<u>Liability Coverage</u>	<u>\$</u>
<u>Corrective Action</u>	<u>\$</u>
<u>Plugging and Abandonment</u>	<u>\$</u>
<u>Total</u>	<u>\$</u>

This [insert: “owner or operator”, or “guarantor”] has not received an adverse opinion, a disclaimer of opinion, or a “going concern” qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of subsection 2 of section 33.1-24-08-85 are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of subsection 3 of section 33.1-24-08-85 are being used to demonstrate compliance with the financial test requirements.]

ALTERNATIVE I

1. Amount of annual underground storage tank aggregate coverage being assured by a financial test, and/or guarantee \$ _____
2. Amount of corrective action, closure and post closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee \$ _____
3. Sum of lines 1 and 2 \$ _____
4. Total tangible assets \$ _____
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] \$ _____
6. Tangible net worth [subtract line 5 from line 4] \$ _____

Yes No

7. Is line 6 at least \$10 million? _____
8. Is line 6 at least 10 times line 3? _____
9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission? _____
10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration? _____
11. Have financial statements for the latest fiscal year been filed with the Rural Utilities Service? _____
12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A?
[Answer "Yes" only if both criteria have been met.] _____

ALTERNATIVE II

1. Amount of annual underground storage tank aggregate coverage being assured by a test, and/or guarantee \$ _____
2. Amount of corrective action, closure and post closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee \$ _____

3. Sum of lines 1 and 2 \$ _____
4. Total tangible assets \$ _____
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] \$ _____
6. Tangible net worth [subtract line 5 from line 4] \$ _____
7. Total assets in the United States [required only if less than 90 percent of assets are located in the United States] \$ _____

Yes No

8. Is line 6 at least \$10 million? _____
9. Is line 6 at least 6 times line 3? _____
10. Are at least 90 percent of assets located in the United States? [If "No", complete line 11.] _____
11. Is line 7 at least 6 times line 3?
[Fill in either lines 12-15 or lines 16-18:] _____
12. Current assets \$ _____
13. Current liabilities \$ _____
14. Net working capital [subtract line 13 from line 12] \$ _____
15. Is line 14 at least 6 times line 3? _____
16. Current bond rating of most recent bond issue: _____
17. Name of rating service: _____
18. Date of maturity of bond: _____
19. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Utilities Service? _____

[If "No", please attach a report from an independent certified public accountant certifying that there are no material differences between data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in subsection 4 of section 33.1-24-08-85 as such rules were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

5. If an owner or operator using the test to provide financial assurance finds that the owner or operator no longer meets the requirements of the financial test based on the yearend financial statements, the owner or operator must obtain alternative coverage within one hundred fifty days of the end of the year for which financial statements have been prepared.
6. The department may require reports of financial condition at any time from the owner or operator, or guarantor, or both. If the department finds, on the basis of such reports or other information, that the owner or operator, or guarantor, or both, no longer meets the financial test requirements of subsections 2 or 3 and 4 of section 33.1-24-08-85, the owner or operator must obtain alternate coverage within thirty days after notification of such a finding.
7. If the owner or operator fails to obtain alternate assurance within one hundred fifty days of finding that the owner or operator no longer meets the requirements of the financial test based on the yearend financial statements, or within thirty days of notification by the department that the owner or operator no longer meets the requirements of the financial test, the owner or operator must notify the department of such failure within ten days.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-86. Guarantee.

1. An owner or operator may satisfy the requirements of section 33.1-24-08-83 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be:
 - a. A firm that:
 - (1) Possesses a controlling interest in the owner or operator;
 - (2) Possesses a controlling interest in a firm described under paragraph (1) subdivision a of subsection 1; or
 - (3) Is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or

- b. A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.
2. Within one hundred twenty days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of section 33.1-24-08-85 based on yearend financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in subsection 4 of section 33.1-24-08-85 and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within one hundred twenty days of the end of that financial reporting year the guarantor shall send via certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the department notifies the guarantor that the guarantor no longer meets the requirements of the financial test of subsections 2 or 3 and 4 of section 33.1-24-08-85, the guarantor must notify the owner or operator within ten days of receiving such notification from the department. In both cases, the guarantee will terminate no less than one hundred twenty days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in subsection 3 of section 33.1-24-08-104.
3. The guarantee must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to the department and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

- (1) Guarantor meets or exceeds the financial test criteria of subsections 2 or 3 and 4 of section 33.1-24-08-85 and agrees to comply with the requirements for guarantors as specified in subsection 2 of section 33.1-24-08 86.
- (2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tank(s) at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12, and the name and address of the facility. This guarantee satisfies sections 33.1-24-08-80 through 33.1-24-08-106 requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental

releases” or “accidental releases”; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

- (3) [Insert appropriate phrase: “On behalf of our subsidiary” (if guarantor is corporate parent of the owner or operator); “On behalf of our affiliate” (if guarantor is a related firm of the owner or operator); or “Incident to our business relationship with” (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to the department and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the department has determined or suspects a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the department shall fund a standby trust fund in accordance with the provisions of section 33.1-24-08-102, in an amount not to exceed the coverage limits specified above.

In the event that the department determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, the guarantor upon written instructions from the department shall fund a standby trust in accordance with the provisions of section 33.1-24-08-102, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from, or alleged to arise from, such injury or damage, the guarantor, upon written instructions from the department, shall fund a standby trust in accordance with the provisions of section 33.1-24-08-102 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

- (4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of subsections 2 or 3 and 4 of section 33.1-24-08-85, guarantor shall send within one hundred twenty days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate one hundred twenty days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

- (5) Guarantor agrees to notify [owner or operator] by certified mail of a

voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding.

- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to chapter 33.1-24-08.
- (7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of sections 33.1-24-08-80 through 33.1-24-08-106 for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt.
- (8) The guarantor's obligation does not apply to any of the following:
- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
 - (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or
 - (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.
- (9) Guarantor expressly waives notice of acceptance of this guarantee by the department, by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 3 of section 33.1-24-08-86 as such rules were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

4. An owner or operator who uses a guarantee to satisfy the requirements of section 33.1-24-08-83 must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the department under section 33.1-24-08-102. The standby trust fund must meet the requirements specified in section 33.1-24-08-93.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-87. Insurance and risk retention group coverage.

1. An owner or operator may satisfy the requirements of section 33.1-24-08-83 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.
2. Each insurance policy must be amended by an endorsement worded as specified in subdivision a, or evidenced by a certificate of insurance worded as specified in subdivision b, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

a. Endorsement

Name: [name of each covered location] _____

Address: [address of each covered location] _____

Policy Number: _____

Period of Coverage: [current policy period] _____

Name of [Insurer or Risk Retention Group]: _____

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12, and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections a through e of this paragraph (2) are hereby amended to conform with subsections a through e:

- a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.

- b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in sections 33.1-24-08-85 through 33.1-24-08-92 and 33.1-24-08-97.

- c. Whenever requested by the department, the ["Insurer" or "Group"] agrees to furnish to the department a signed duplicate original of

the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"]; except for nonpayment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the insured. Cancellation for nonpayment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in subdivision a of subsection 2 of section 33.1-24-08-87 and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

[Signature of authorized representative of Insurer or Risk Retention Group]
[Name of person signing]
[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]
[Address of Representative]

b. Certificate of insurance

Name: [name of each covered location]

Address: [address of each covered location]

Policy Number:

Endorsement: [if applicable]

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]:

Address of [Insurer or Risk Retention Group]: _____

Name of Insured: _____

Address of Insured: _____

Certification:

1. [Name of Insurer or Risk Retention Group], [the “Insurer” or “Group”], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12, and the name and address of the facility.]

for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage caused by” either “sudden accidental releases” or “nonsudden accidental releases” or “accidental releases”; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the “each occurrence” and “annual aggregate” limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The [“Insurer” or “Group”] further certifies the following with respect to the insurance described in paragraph (1):

a. Bankruptcy or insolvency of the insured shall not relieve the [“Insurer” or “Group”] of its obligations under the policy to which this certificate applies.

b. The [“Insurer” or “Group”] is liable for the payment of

amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in sections 33.1-24-08-85 through 33.1-24-08-92 and 33.1-24-08-97.

c. Whenever requested by the department, the ["Insurer" or "Group"] agrees to furnish to the department a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for nonpayment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of sixty days after a copy of such written notice is received by the insured. Cancellation for nonpayment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or nonrenewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in subdivision b of subsection 2 of section 33.1-24-08-87 and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states"].

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

3. Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-88. Surety bond.

1. An owner or operator may satisfy the requirements of section 33.1-24-08-83 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest circular 570 of the United States department of the treasury.
2. The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

Performance Bond

Date bond executed: _____

Period of coverage: _____

Principal: [legal name and business
address of owner or operator]: _____

Type of organization: [insert "individual", "joint
venture", "partnership", or "corporation"]:

State of incorporation (if applicable): _____

Surety(ies):[name(s) and business address(es)]: _____

Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12, and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" provided in the notification submitted pursuant to and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" "arising from operating the underground storage tank"].

Penal sums of bond:

Per occurrence: _____ \$
Annual aggregate: _____ \$

Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to the department, in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under chapter 23.1-04-06 of the North Dakota Century Code to provide financial assurance for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with sections 33.1-24-08-50 through 33.1-24-08-57 and the department's instructions for", and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in sections 33.1-24-08-80 through 33.1-24-08-106, within one hundred twenty days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the department that the Principal has failed to [“take corrective action, in accordance with chapter 33.1-24-08, sections 33.1-24-08-50 through 33.1-24-08-57 and the department’s instructions”, and/or “compensate injured third parties”] as guaranteed by this bond, the Surety(ies) shall either perform [“corrective action in accordance with chapter 33.1-24-08 and the department’s instructions”, and/or “third-party liability compensation”] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the department under section 33.1-24-08-102.

Upon notification by the department that the Principal has failed to provide alternate financial assurance within sixty days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that the department has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by the department under section 33.1-24-08-102.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its(their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the one hundred twenty days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Thereof, the Principal and Surety(ies) have executed this Bond and

have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in subsection 2 of section 33.1-24-08-88 as such rules were constituted on the date this bond was executed.

Principal

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate seal]

Corporate Surety(ies)

[Name and address]
[State of Incorporation: _____]
[Liability limit:\$ _____]
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium:\$ _____

3. Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

4. The owner or operator who uses a surety bond to satisfy the requirements of section 33.1-24-08-83 must establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the department under section 33.1-24-08-98. This standby trust fund must meet the requirements specified in section 33.1-24-08-93.

History: Effective _____, 2018.
General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-89. Letter of credit.

1. An owner or operator may satisfy the requirements of section 33.1-24-08-83 by

obtaining an irrevocable standby letter of credit that conforms to the requirements of this section. The issuing institution must be an entity that has the authority to issue letters of credit in each state where used and whose letter-of-credit operations are regulated and examined by a federal or state agency.

2. The letter of credit must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

[Name and address of issuing institution]

[Name and address of the department]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars (\$[insert dollar amount]), available upon presentation [insert, if more than one department is a beneficiary, "by any one of you"] of

- (1) Your sight draft, bearing reference to this letter of credit, No. _____, and
- (2) Your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to rules issued under authority of chapter 23.1-04-06 of the North Dakota Century Code".

This letter of credit may be drawn on to cover [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] \$[insert dollar amount] per occurrence and [in words] \$[insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12, and the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least one hundred twenty days before the current expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for one hundred twenty days after the date of receipt by [owner of operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subsection 2 of section 33.1-24-08-89 as such rules were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]
[Date]

This credit is subject to [insert “the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce”, or “the Uniform Commercial Code”].

3. An owner or operator who uses a letter of credit to satisfy the requirements of section 33.1-24-08-83 must also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the department under section 33.1-24-08-102. This standby trust fund must meet the requirements specified in section 33.1-24-08-93.
4. The letter of credit must be irrevocable with a term specified by the issuing institution. The letter of credit must provide that credit be automatically renewed for the same term as the original term, unless, at least one hundred twenty days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the

terms of the letter of credit, the one hundred twenty days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-90. [Reserved]

33.1-24-08-91. [Reserved]

33.1-24-08-92. Trust fund.

1. An owner or operator may satisfy the requirements of section 33.1-24-08-83 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.
2. The wording of the trust agreement must be identical to the wording specified in subdivision a of subsection 2 of section 33.1-24-08-93, and must be accompanied by a formal certification of acknowledgement as specified in subdivision b of subsection 2 of section 33.1-24-08-93.
3. The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanisms that provide the remaining required coverage.
4. If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the department for release of the excess.
5. If other financial assurance as specified in sections 33.1-24-08-80 through 33.1-24-08-106 is substituted for all or part of the trust fund, the owner or operator may submit a written request to the department for release of the excess.
6. Within sixty days after receiving a request from the owner or operator for release of funds as specified in subsection 4 or 5, the department will instruct the trustee to release to the owner or operator such funds as the department specifies in writing.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-93. Standby trust fund.

1. An owner or operator using any one of the mechanisms authorized by sections

33.1-24-08-86, 33.1-24-08-88, or 33.1-24-08-89 must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.

2. The following apply:

a. The standby trust agreement, or trust agreement, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

Trust agreement, the "Agreement", entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation", "partnership", "association", or "proprietorship"], the "Grantor", and [name of corporate trustee], [insert "Incorporated in the state of _____" or "a national bank"], the "Trustee".

Whereas, the department has established certain rules applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standby [insert "standby" where trust agreement is standby trust agreement] trust agreement.

[Whereas, the Grantor has elected to establish [insert either "a guarantee", "surety bond", or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.);

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism.

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)].

Section 3. Establishment of Fund.

The Grantor and the Trustee hereby establish a trust fund, the "Fund", for the benefit of [the department]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided [The Fund is established initially as a standby to receive payments and shall not consist of any property.]. Payments made by the provider of financial assurance pursuant to the [department's] instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by the department.

Section 4. Payment for ["Corrective Action" and/or "Third-Party Liability Claims"].

The Trustee shall make payments from the Fund as [the department] shall direct, in writing, to provide for the payment of the costs of [insert: "taking corrective action" and/or "compensating third-parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care,

custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

The Trustee shall reimburse the Grantor, or other persons as specified by the department, from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as the department shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the department specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund.

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge the duties of the Trustee with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;
- (ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and
- (iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment.

The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee.

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the

Fund.

Section 9. Taxes and Expenses.

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel.

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation.

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee.

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee.

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and

instructions by the department to the Trustee shall be in writing, signed by the department, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the department, except as provided for herein.

Section 14. Amendment of Agreement.

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the department] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination.

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and the department, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification.

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law.

This agreement shall be administered, construed, and enforced according to the laws of the state of North Dakota, or the Comptroller of the Currency in the case of National Association of Banks.

Section 18. Interpretation.

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to

be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in subdivision a of subsection 2 of section 33.1-24-08-93 as such rules were constituted on the date written above.

[Signature of Grantor]

[Name of the Grantor]

[Title]

Attest:

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal]

[Signature of Witness]

[Name of the Witness]

[Title]

[Seal]

b. The standby trust agreement, or trust agreement, must be accompanied by a formal certification of acknowledgment similar to the following.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that the owner or operator resides at [address], that the owner or operator is [title] of [corporation], the corporation described in and which executed the above instrument; that the owner or operator knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that the owner or operator signed their name thereto by like order.

[Signature of Notary Public]

[Name of Notary Public]

3. The department will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the department determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

4. An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this chapter.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-94. Local government bond rating test.

1. A general purpose local government owner or operator, or local government, or both, serving as a guarantor may satisfy the requirements of section 33.1-24-08-83 currently outstanding issue or issues of general obligation bonds of one million dollars or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard and Poor's rating of AAA, AA, A, or BBB. Where a local government has multiple outstanding issues, or where a local government's bonds are rated by both Moody's and Standard and Poor's, the lowest rating must be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance may not be considered in determining the amount of applicable bonds outstanding.
2. A local government owner or operator or local government serving as a guarantor that is not a general purpose local government and does not have the legal authority to issue general obligation bonds may satisfy the requirements of section 33.1-24-08-83 by having a currently outstanding issue or issues of revenue bonds of one million dollars or more, excluding refunded issues and by also having a Moody's rating of Aaa, Aa, A, or Baa, or a Standard and Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the local government. Where bonds are rated by both Moody's and Standard and Poor's, the lower rating for each bond must be used to determine eligibility. Bonds that are backed by credit enhancement may not be considered in determining the amount of applicable bonds outstanding.
3. The local government owner or operator or guarantor, or both, must maintain a copy of its bond rating published within the last twelve months by Moody's or Standard and Poor's.
4. To demonstrate that it meets the local government bond rating test, the chief financial officer of a general purpose local government owner or operator, or guarantor, or both, must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank or tanks.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

<u>Issue Date</u>	<u>Maturity Date</u>	<u>Outstanding Amount</u>	<u>Bond Rating</u>	<u>Rating Agency</u>
				[Moody's or Standard and Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of one million dollars. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard and Poor's are rated as at least investment grade (Moody's Baa or Standard and Poor's BBB) based on the most recent ratings published within the last twelve months. Neither rating service has provided notification within the last twelve months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in subsection 4 of section 33.1-24-08-94 as such rules were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

5. To demonstrate that it meets the local government bond rating test, the chief financial officer of local government owner or operator, or guarantor, or both, other than a general purpose government must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of one million dollars. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard and Poor's are rated as at least investment grade (Moody's Baa or Standard and Poor's BBB) based on the most recent ratings published within the last twelve months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last twelve months of downgrading of bond ratings below an investment grade nor of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in subsection 5 of section 33.1-24-08-94 as such rules were constituted on the date shown immediately below.

[Date]

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage”] caused by [insert: “sudden accidental releases” and/or “nonsudden accidental releases” or “accidental releases”] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating an underground storage tank or tanks. This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

<u>Issue Date</u>	<u>Maturity Date</u>	<u>Outstanding Amount</u>	<u>Bond Rating</u>	<u>Rating Agency</u>
				[Moody's or Standard and Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in subsection 5 of section 33.1-24-08-94 as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

6. The department may require reports of financial condition at any time from the local

government owner or operator, or local government guarantor, or both. If the department finds, on the basis of such reports or other information, that the local government owner or operator, or guarantor, or both, no longer meets the local government bond rating test requirements of this section, the local government owner or operator must obtain alternative coverage within thirty days after notification of such a finding.

7. If a local government owner or operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the local government owner or operator must obtain alternative coverage within one hundred fifty days of the change in status.
8. If the local government owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the bond rating test or within 30 days of notification by the department that it no longer meets the requirements of the bond rating test, the owner or operator must notify the department of such failure within 10 days.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-95. Local government financial test.

1. A local government owner or operator may satisfy the requirements of section 33.1-24-08-83 by passing the financial test specified in this section. To be eligible to use the financial test, the local government owner or operator must have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the local government financial test, the owner or operator must meet the criteria of subdivision b of subsection 2 and subdivision c of subsection 2 based on yearend financial statements for the latest completed fiscal year.
2. The local government owner or operator must have the following information available, as shown in the yearend financial statements for the latest completed fiscal year:
 - a. The following apply:
 - (1) Total revenues: Consists of the sum of general fund operating and nonoperating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the local government using the

financial test (interfund transfers), liquidation of investments, and issuance of debt.

(2) Total expenditures: Consists of the sum of general fund operating and nonoperating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprises, debt service, capital projects, and special revenues. For purposes of this test, the calculation of total expenditures shall include all transfers between funds under the direct control of the local government using the financial test (interfund transfers).

(3) Local revenues: Consists of total revenues minus the sum of all transfers from other governmental entities, including all moneys received from federal, state, or local government sources.

(4) Debt service: Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on noninterest-bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

(5) Total funds: Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the local government's financial reporting year. Includes federal securities, federal agency securities, state and local government securities, and other securities such as bonds, notes and mortgages. For purposes of this test, the calculation of total funds shall exclude agency funds, private trust funds, accounts receivable, value of real property and other nonsecurity assets.

(6) Population: Consists of the number of people in the area served by the local government.

b. The local government's yearend financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The local government cannot have outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

c. The local government owner or operator must have a letter signed by the

chief financial officer worded as specified in subsection 3.

3. To demonstrate that it meets the financial test under subsection 2, the chief financial officer of the local government owner or operator, must sign, within one hundred twenty days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [an] underground storage tank[s].

Underground storage tanks at the following facilities are assured by this financial test [list for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to section 33.1-24-08-12.].

This owner or operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

WORKSHEET FOR MUNICIPAL FINANCIAL TEST

Part I. Basic Information

1. Total Revenues

a. Revenues (dollars) _____

Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and nonoperating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency

capacity.

b. Subtract interfund transfers (dollars)

c. Total Revenues (dollars)

2. Total Expenditures

a. Expenditures (dollars)

Value consists of the sum of general fund operating and nonoperating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.

b. Subtract interfund transfers (dollars)

c. Total Expenditures (dollars)

3. Local Revenues

a. Total Revenues (from 1c) (dollars)

b. Subtract total intergovernmental transfers (dollars)

c. Local Revenues (dollars)

4. Debt Service

a. Interest and fiscal charges (dollars)

b. Add debt retirement (dollars)

c. Total Debt Service (dollars)

5. Total Funds (Dollars)

(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds.)

6. Population (Persons)

Part II: Application of Test

7. Total Revenues to Population

a. Total Revenues (from 1c)

b. Population (from 6)

c. Divide 7a by 7b

d. Subtract 417

e. Divide by 5.212

f. Multiply by 4.095

8. Total Expenses to Population

a. Total Expenses (from 2c)

b. Population (from 6)

c. Divide 8a by 8b

d. Subtract 524

e. Divide by 5.401

f. Multiply by 4.095

9. Local Revenues to Total Revenues

a. Local Revenues (from 3c)

b. Total Revenues (from 1c)

c. Divide 9a by 9b

d. Subtract .695

e. Divide by .205

f. Multiply by 2.840

10. Debt Service to Population

a. Debt Service (from 4c)

b. Population (from 6)

c. Divide 10a by 10b

d. Subtract 51

e. Divide by 1.038

f. Multiply by B1.866

11. Debt Service to Total Revenues

a. Debt Service (from 4c)

b. Total Revenues (from 1c)

c. Divide 11a by 11b

d. Subtract .068

e. Divide by .259

f. Multiply by B3.533

12. Total Revenues to Total Expenses

a. Total Revenues (from 1c)

b. Total Expenses (from 2c)

c. Divide 12a by 12b

d. Subtract .910

e. Divide by .899

f. Multiply by 3.458

13. Funds Balance to Total Revenues

a. Total Funds (from 5)

b. Total Revenues (from 1c)

c. Divide 13a by 13b

d. Subtract .891

e. Divide by 9.156

f. Multiply by 3.270

14. Funds Balance to Total Expenses

a. Total Funds (from 5)

b. Total Expenses (from 2c)

c. Divide 14a by 14b

d. Subtract .866

e. Divide by 6.409

f. Multiply by 3.270

15. Total Funds to Population

a. Total Funds (from 5)

b. Population (from 6)

c. Divide 15a by 15b

d. Subtract 270

e. Divide by 4.548

f. Multiply by 1.866

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in subsection 3 of section 33.1-24-08-95 as such rules were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

4. If a local government owner or operator using the test to provide financial assurance finds that it no longer meets the requirements of the financial test based on the yearend financial statements, the owner or operator must obtain alternative coverage within one hundred fifty days of the end of the year for which financial statements have been prepared.
5. The department may require reports of financial condition at any time from the local government owner or operator. If the department finds, on the basis of such reports or other information, that the local government owner or operator no longer meets the financial test requirements of subsections 2 and 5, the owner or operator must obtain alternative coverage within thirty days after notification of such a finding.
6. If the local government owner or operator fails to obtain alternate assurance within one hundred fifty days of finding that it no longer meets the requirements of the financial test based on the yearend financial statements or within thirty days of notification by the department that it no longer meets the requirements of the financial test, the owner or operator must notify the department of such failure within ten days.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-96. Local government guarantee.

1. A local government owner or operator may satisfy the requirements of section 33.1-24-08-83 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be either the estate in which the local government owner or operator is located or a local government having a “substantial governmental relationship” with the owner and operator and issuing the guarantee as an act incident to that relationship. A local government acting as the guarantor must:
 - a. Demonstrate that it meets the bond rating test requirement of section 33.1-24-08-94 and deliver a copy of the chief financial officer’s letter as contained in subsection 4 and 5 of section 33.1-24-08-94 to the local government owner or operator.
 - b. Demonstrate that it meets the worksheet test requirements of section 33.1-24-08-95 and deliver a copy of the chief financial officer’s letter as contained in subsection 3 of section 33.1-24-08-95.
 - c. Demonstrate that it meets the local government fund requirements of subsections 1, 2, or 3 of section 33.1-24-08-97, and deliver a copy of the chief financial officer’s letter as contained in section 33.1-24-08-97 to the local government owner or operator.
2. If the local government guarantor is unable to demonstrate financial assurance

under any of section 33.1-24-08-94, 33.1-24-08-95, subsection 1 of section 33.1-24-08-97, subsection 2 of section 33.1-24-08-97, or subsection 3 of section 33.1-24-08-97, at the end of the financial reporting year, the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. The guarantee will terminate no less than one hundred twenty days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in subsection 5 of section 33.1-24-08-104.

3. The guarantee agreement must be worded as specified in subsection 4 or 5, depending on which of the following alternative guarantee arrangements is selected:

a. If, in the default or incapacity of the owner or operator, the guarantor guarantees to fund a standby trust as directed by the department, the guarantee shall be worded as specified in subsection 4.

b. If in the default or incapacity of the owner or operator, the guarantor guarantees to make payments as directed by the department for taking corrective action or compensating third parties for bodily injury and property damage, the guarantee shall be worded as specified in subsection 5.

4. If the guarantor is a state, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

LOCAL GOVERNMENT GUARANTEE WITH STANDBY TRUST MADE BY A STATE

Guarantee made this [date] by North Dakota, herein referred to as guarantor, to the department and to any and all third parties, and obligees, on behalf of [local government owner or operator].

Recitals.

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank or tanks, covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to chapter 33.1-24-08, and the name and address of the facility.] This guarantee satisfies sections 33.1-24-08-80 through 33.1-24-08-106 requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases", or "nonsudden accidental releases", or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each

tank or location] arising from operating the above-identified underground storage tank or tanks in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

- (3) Guarantor guarantees to the department and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the department has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the department shall fund a standby trust fund in accordance with the provisions of section 33.1-24-08-102, in an amount not to exceed the coverage limits specified above.

In the event that the department determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank or tanks in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, the guarantor upon written instructions from the department shall fund a standby trust fund in accordance with the provisions of section 33.1-24-08-102, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank or tanks, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instruction is from the department, shall fund a standby trust in accordance with the provisions of section 33.1-24-08-102, satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

- (4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming guarantor as debtor, within ten days after commencement of the proceeding.
- (5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to chapter 33.1-24-08.
- (6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of sections 33.1-24-08-80 through 33.1-24-08-106, for the above identified tank or tanks, except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than

one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(7) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or

(e) Bodily injury or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

(8) Guarantor expressly waives notice of acceptance of this guarantee by department, by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 4 of section 33.1-24-08-96 as such rules were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

If the guarantor is a local government, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets area to be replaced with relevant information and the brackets deleted:

LOCAL GOVERNMENT GUARANTEE WITH STANDBY TRUST MADE BY A LOCAL GOVERNMENT

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of North Dakota, herein referred to as guarantor, to the department, and to any and all third parties, and obligees, on behalf of [local government owner or operator].

Recitals.

- (1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of section 33.1-24-08-94, the local government financial test requirements of section 33.1-24-08-95, or the local government fund under subsection 1, 2, or 3 of section 33.1-24-08-97.
- (2) [Local government owner or operator] owns or operates the following underground storage tank or tanks covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to chapter 33.1-24-08, and the name and address of the facility.] This guarantee satisfies sections 33.1-24-08-80 through 33.1-24-08-106 requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank or tanks in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.
- (3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to the department and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the department has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the department shall fund a standby trust fund in accordance with the provisions of section 33.1-24-08-102 in an amount not to exceed the coverage limits specified above.

In the event that the department determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank or tanks in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, the guarantor upon written

instructions from the department shall fund a standby trust fund in accordance with the provisions of section 33.1-24-08-102, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank or tanks, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the department shall fund a standby trust in accordance with the provisions of section 33.1-24-08-102 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

- (4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within one hundred twenty days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.
- (5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), United States Code naming guarantor as debtor, within ten days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to chapter 33.1-24-08.
- (7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of sections 33.1-24-08-80 through 33.1-24-08-106 for the above identified tank or tanks, except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt.
- (8) The guarantor's obligation does not apply to any of the following:
 - (a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of [insert: local government owner or operator];
 - (c) Bodily injury or property damage arising from the ownership,

maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or

(e) Bodily injury or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the department, by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 4 of section 33.1-24-08-96 as such rules were constituted on the effective date shown immediately below.

Effective date: _____
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary: _____

5. If the guarantor is a state, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

LOCAL GOVERNMENT GUARANTEE WITHOUT STANDBY TRUST MADE BY A STATE

Guarantee made this [date] by North Dakota, herein referred to as guarantor, to the department and to any and all third parties, and obligees, on behalf of [local government owner or operator].

Recitals.

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank or tanks covered by this guarantee: [list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tank or tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered

by this instrument, list the tank identification number provided in the notification submitted pursuant to chapter 33.1-24-08, and the name and address of the facility]. This guarantee satisfies sections 33.1-24-08-80 through 33.1-24-08-106 requirements for assuring funding for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage caused by” either “sudden accidental releases” or “nonsudden accidental releases” or “accidental releases”; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank or tanks in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

- (3) Guarantor guarantees to the department and to any and all third parties and obligees that:

In the event that [local government owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of cancellation of this guarantee and the department has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the department shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the department determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank or tanks in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, the guarantor, upon written instructions from the department, shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental releases arising from the operation of the above-identified tank or tanks, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the department, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

- (4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), United States Code naming guarantor as debtor, within ten days after commencement of the proceeding.

- (5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator]

pursuant to chapter 33.1-24-08.

- (6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of sections 33.1-24-08-80 through 33.1-24-08-106, for the above-identified tank or tanks, except that guarantor may cancel this guarantee by sending notice of certified mail to [owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.
- (7) The guarantor's obligation does not apply to any of the following:
- (a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
 - (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or
 - (e) Bodily injury or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.
- (8) Guarantor expressly waives notice of acceptance of this guarantee by the department, by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 5 of section 33.1-24-08-96 as such rules were constituted on the effective date shown immediately below.

Effective date:
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

If the guarantor is a local government, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

LOCAL GOVERNMENT GUARANTEE WITHOUT STANDBY TRUST MADE BY A LOCAL GOVERNMENT

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of North Dakota, herein referred to as guarantor, to the department and to any and all third parties, and obligees, on behalf of [local government owner or operator].

Recitals.

- (1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of section 33.1-24-08-94, the local government financial test requirements of section 33.1-24-08-95, or the local government fund under subsection 1, 2, or 3 of section 33.1-24-08-97.
- (2) [Local government owner or operator] owns or operates the following underground storage tank or tanks covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to chapter 33.1-24-08, and the name and address of the facility.] This guarantee satisfies sections 33.1-24-08-80 through 33.1-24-08-106 requirements for assuring funding for [insert: “taking corrective action” and/or “compensating third parties for bodily injury and property damage caused by” either “sudden accidental releases” or “nonsudden accidental releases” or “accidental releases”; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank or tanks in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.
- (3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to the department and to any and all third parties and obligees that:

In the event that [local government owner or operator] fails to provide alternative coverage within sixty days after receipt of a notice of

cancellation of this guarantee and the department has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the department shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the department determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank or tanks in accordance with sections 33.1-24-08-50 through 33.1-24-08-57, the guarantor, upon written instructions from the department, shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank or tanks, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the department, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

- (4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within one hundred twenty days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.
- (5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), United States Code naming guarantor as debtor, within ten days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to chapter 33.1-24-08.
- (7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of sections 33.1-24-08-80 through 33.1-24-08-106 for the above-identified tank or tanks, except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than one hundred twenty days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the

guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation disability, benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank; or

(e) Bodily injury or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of section 33.1-24-08-83.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the department, by any or all third parties, or by the [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subsection 5 of section 33.1-24-08-96 as such rules were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-97. Local government fund. A local government owner or operator may satisfy the requirements of section 33.1-24-08-83 establishing a dedicated fund account that conforms to the requirements of this section. Except as specified in subsection 2, a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

1. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks and is funded for the full amount of coverage required under section 33.1-24-08-83 or funded for part of the required amount of coverage and used in combination with other mechanism or mechanisms that provide the remaining coverage.
2. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, and is funded for five times the full amount of coverage required under section 33.1-24-08-83, or funded for part of the required amount of coverage and used in combination with other mechanisms that provide the remaining coverage. If the fund is funded for less than five times the amount of coverage required under section 33.1-24-08-83, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund.
3. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks. A payment is made to the fund once every year for seven years until the fund is fully-funded. This seven-year period is hereafter referred to as the “pay-in-period”. The amount of each payment must be determined by this formula:

$$\frac{TF - CF}{Y}$$

Where TF is the total required financial assurance for the owner or operator, CF is the current amount in the fund, and Y is the number of years remaining in the pay-in-period, and:

- a. The local government owner or operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the

required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks; or

b. The local government owner or operator has a letter signed by the appropriate state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter must also state that prior voter approval is not necessary before use of the bonding authority.

4. To demonstrate that it meets the requirements of the local government fund, the chief financial officer of the local government owner or operator or guarantor, or both, must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From the Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank or tanks.

Underground storage tanks at the following facilities are assured by this local government fund mechanism: [list for each facility: the name and address of the facility where tanks are assured by the local government fund].

[Insert: "The local government fund is funded for the full amount of coverage required under section 33.1-24-08-83, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage", or "The local government fund is funded for five times the full amount of coverage required under section 33.1-24-08-83, or funded for part of the required amount of coverage and used in combination with other mechanisms(s) that provide the remaining coverage", or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name of local government owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the state attorney general stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the local government fund are as follows:

Amount in fund (market value of fund at the close of last fiscal year): \$ _____
[If fund balance is incrementally funded as specified in subsection 3, insert:

Amount added to fund in the most recently completed fiscal year: \$ _____
Number of years remaining in the pay-in-period: _____

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in subsection 4 of section 33.1-24-08-97, as such rules were constituted on the date shown immediately below:

[Date]
[Signature]
[Name]
[Title]

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-98. Substitution of financial assurance mechanisms by owner or operator.

1. An owner or operator may substitute any alternate financial assurance mechanisms as specified in sections 33.1-24-08-80 through 33.1-24-08-106, provided that at all times the owner or operator maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of section 33.1-24-08-83.
2. After obtaining alternate financial assurance as specified in sections 33.1-24-08-80 through 33.1-24-08-106, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-99. Cancellation or nonrenewal by a provider of financial assurance.

1. Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

- a. Termination of a guarantee, a surety bond, or a letter of credit may not occur until one hundred twenty days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.
 - b. Termination of insurance or risk retention group coverage, except for nonpayment or misrepresentation by the insured, or state-funded assurance may not occur until sixty days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for nonpayment of premium or misrepresentation by the insured may not occur until a minimum of ten days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.
2. If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in section 33.1-24-08-104, the owner or operator must obtain alternate coverage as specified in this section within sixty days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within sixty days after receipt of the notice of termination, the owner or operator must notify the department of such failure and submit:
- a. The name and address of the provider of financial assurance;
 - b. The effective date of termination; and
 - c. The evidence of the financial assistance mechanism subject to the termination maintained in accordance with subsection 2 of section 33.1-24-08-101.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-100. Reporting by owner or operator.

1. An owner or operator must submit the appropriate forms listed in subsection 2 of section 33.1-24-08-101 documenting current evidence of financial responsibility to the department:
 - a. Within thirty days after the owner or operator identifies a release from an underground storage tank required to be reported under section 33.1-24-08-43 or 33.1-24-08-51;
 - b. If the owner or operator fails to obtain alternate coverage as required by sections 33.1-24-08-80 through 33.1-24-08-106, within thirty days after the owner or operator receives notice of:
 - (1) Commencement of a voluntary or involuntary proceeding under

Title 11 (Bankruptcy), United States Code, naming a provider of financial assurance as a debtor;

(2) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism;

(3) Failure of a guarantor to meet the requirements of the financial test;
or

(4) Other incapacity of a provider of financial assurance; or

c. As required by subsection 7 of section 33.1-24-08-85 and subsection 2 of section 33.1-24-08-99.

2. An owner or operator must certify compliance with the financial responsibility requirements of chapter 33.1-24-08 as specified in the new tank notification form when notifying the department of the installation of a new underground storage tank under section 33.1-24-08-12.

3. The department may require an owner or operator to submit evidence of financial assurance as described in subsection 2 of section 33.1-24-08-101 or other information relevant to compliance with sections 33.1-24-08-80 through 33.1-24-08-106 at any time.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-101. Recordkeeping.

1. Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106 for an underground storage tank until released from the requirements of sections 33.1-24-08-80 through 33.1-24-08-106 under section 33.1-24-08-103. An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of business. Records maintained offsite must be made available upon request of the department.

2. An owner or operator must maintain the following types of evidence of financial responsibility:

a. An owner or operator using an assurance mechanism specified in sections 33.1-24-08-85 through 33.1-24-08-90, or section 33.1-24-08-92, or sections 33.1-24-08-94 through 33.1-24-08-97, must maintain a copy of the instrument worded as specified;

b. An owner or operator using a financial test or guarantee, or a local

government financial test, or a local government guarantee supported by a local government financial test, must maintain a copy of the chief financial officer's letter based on yearend financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than one hundred twenty days after the close of the financial reporting year;

- c. An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement;
- d. A local government owner or operator using a local government guarantee under subsection 4 of section 33.1-24-08-96 must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement;
- e. A local government owner or operator using the local government bond rating test under section 33.1-24-08-94 must maintain a copy of its bond rating published within the last twelve months by Moody's or Standard and Poor's;
- f. A local government owner or operator using the local government guarantee under section 33.1-24-08-96, where the guarantor's demonstration of financial responsibility relies on the bond rating test under section 33.1-24-08-94 must maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard and Poor's;
- g. An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements;
- h. An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the state under subsection 4 of section 33.1-24-08-91;
- i. An owner or operator using a local government fund under section 33.1-24-08-97 must maintain the following documents:
 - (1) A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund;
 - (2) Yearend financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under subsection 3 of section 33.1-24-08-97 using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund; and

(3) If the fund is established under subsection 3 of section 33.1-24-08-97 using incremental funding backed by bonding authority, the owner or operator must also maintain documentation of the required bonding authority, including either the results of a voter referendum, under subdivision a of subsection 3 of section 33.1-24-08-97, or attestation by the state attorney general as specified under subdivision b of subsection 3 of section 33.1-24-08-97;

i. A local government owner or operator using the local government guarantee supported by the local government fund must maintain a copy of the guarantor's yearend financial statements for the most recent completed financial reporting year showing the amount of the fund; or

k. An owner or operator using an assurance mechanism specified in sections 33.1-24-08-85 through 33.1-24-08-97 must maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

[Owner or operator] hereby certifies that it is in compliance with the requirements of sections 33.1-24-08-80 through 33.1-24-08-106.

The financial assurance mechanism(s) used to demonstrate financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106 is [are] as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases".]

[Signature of owner or operator]

[Name of owner or operator]

[Title]

[Date]

[Signature of witness or notary]

[Name of witness or notary]

[Date]

The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-102. Drawing on financial assurance mechanisms.

1. Except as specified in subsection 4, the department shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the department, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:
 - a. The following conditions exist:
 - (1) The owner or operator fails to establish alternate financial assurance within sixty days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanisms; and
 - (2) The department determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the department pursuant to sections 33.1-24-08-40 through 33.1-24-08-43 or 33.1-24-08-50 through 33.1-24-08-57 of a release from an underground storage tank covered by the mechanism; or
 - b. The conditions of subdivision a of subsection 2 or paragraph (1) or (2) of subdivision b of subsection 2 are satisfied.
2. The department may draw on a standby trust fund when:
 - a. The department makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under sections 33.1-24-08-50 through 33.1-24-08-57; or
 - b. The department has received either:
 - (1) Certification from the owner or operator and the third-party liability claimant or claimants and from attorneys representing the owner or operator and the third-party liability claimant or claimants that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as principals and as legal representatives of [insert owner or operator] and [insert name and address of third party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of \$[_____].

[Signatures]

Owner or Operator

Attorney for Owner or Operator

[Notary]

Date

[Signature(s)]

Claimant(s)

Attorney(s) for Claimant(s)

[Notary]

Date _____ or

- (2) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under sections 33.1-24-08-80 through 33.1-24-08-106 and the department determines that the owner or operator has not satisfied the judgment.
3. If the department determines that the amount of corrective action costs and third-party liability claims eligible for payment under subsection 2 may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The department shall pay third-party liability claims in the order in which the department receives certifications under paragraph (1) of subdivision b of subsection 2 and valid court orders under paragraph (2) of subdivision b of subsection 2.
4. A government entity acting as guarantor under subsection 5 of section 33.1-24-08-96, the local government guarantee without standby trust, shall make payments as directed by the department under the circumstances described in subsections 1, 2, and 3.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-103. Release from requirements. An owner or operator is no longer required to maintain financial responsibility under sections 33.1-24-08-80 through 33.1-24-08-106 for an underground storage tank after the tank has been permanently closed or undergoes a change-in-service or, if corrective action is required, after corrective action has been completed and the tank has been permanently closed or undergoes a change-in-service as required by sections 33.1-24-08-60 through 33.1-24-08-64.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-104. Bankruptcy or other incapacity of owner or operator or provider of

financial assurance.

1. Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming an owner or operator as debtor, the owner or operator must notify the department by certified mail of such commencement and submit the appropriate forms listed in subsection 2 of section 33.1-24-08-101 documenting current financial responsibility.
2. Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in section 33.1-24-08-86.
3. Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming a local government owner or operator as debtor, the local government owner or operator must notify the department by certified mail of such commencement and submit the appropriate forms listed in subsection 2 of section 33.1-24-08-101 documenting current financial responsibility.
4. Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy) United States Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor must notify the local government owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in section 33.1-24-08-96.
5. An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in sections 33.1-24-08-80 through 33.1-24-08-106 within thirty days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within thirty days after such notification, the owner or operator must notify the department.
6. Within thirty days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-105. Replenishment of guarantees, letters of credit, or surety bonds.

1. If at any time after a standby trust is funded upon the instruction of the department with funds drawn from a guarantee, local government, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:
 - a. Replenish the value of financial assurance to equal the full amount of coverage required; or
 - b. Acquire another financial assurance mechanism for the amount which funds in the standby trust have been reduced.
2. For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by section 33.1-24-08-83. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-106. [Reserved]

33.1-24-08-107. [Reserved]

33.1-24-08-108. [Reserved]

33.1-24-08-109. [Reserved]

33.1-24-08-110. [Reserved]

33.1-24-08-111. [Reserved]

33.1-24-08-112. [Reserved]

33.1-24-08-113. [Reserved]

33.1-24-08-114. [Reserved]

33.1-24-08-115. Definitions (lender liability).

1. “Borrower, debtor, or obligor” is a person whose underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located is encumbered by a security interest. These terms may be used interchangeably.
2. “Holder” is a person who, upon the effective date of this rule, or in the future, maintains indicia of ownership, as defined in subsection 3, primarily to protect a

security interest, as defined in subdivision a of subsection 6, in a petroleum underground storage tank or underground storage tank system or facility or property on which a petroleum underground storage tank or underground storage tank system is located. A holder includes the initial holder (such as a loan originator); any subsequent holder (such as a successor-in-interest or subsequent purchaser of the security interest on the secondary market); a guarantor of an obligation, surety, or any other person who holds ownership indicia primarily to protect a security interest; or a receiver or other person who acts on behalf or for the benefit of a holder.

3. “Indicia of ownership” means evidence of a secured interest, evidence of an interest in a security interest, or evidence of an interest in real or personal property securing a loan or other obligation, including any legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. Evidence of such interests include, but are not limited to, mortgages, deeds of trust, liens, surety bonds and guarantees of obligations, title held pursuant to a lease financing transaction in which the lessor does not select initially the leased property (hereinafter “lease financing transaction”), and legal or equitable title obtained pursuant to foreclosure. Evidence of such interests also includes assignments, pledges, or other rights to or other forms of encumbrance against property that are held primarily to protect a security interest. A person is not required to hold title or a security interest in order to maintain indicia of ownership.
4. “Operation” means, for purposes of this section, the use, storage, filling, or dispensing of petroleum contained in an underground storage tank or underground storage tank system.
5. Petroleum production, refining, and marketing.
 - a. “Petroleum production” means the production of crude oil or other forms of petroleum, as defined in section 33.1-24-08-03, as well as the production of petroleum products from purchased materials.
 - b. “Petroleum refining” means the cracking, distillation, separation, conversion, upgrading, and finishing of refined petroleum or petroleum products.
 - c. “Petroleum marketing” means the distribution, transfer, or sale of petroleum or petroleum products for wholesale or retail purposes.
6. “Primarily to protect a security interest” means that the holder’s indicia of ownership are held primarily for the purpose of securing payment or performance of an obligation.
 - a. “Primarily to protect a security interest”, as used in sections 33.1-24-08-115 through 33.1-24-08-130, does not include indicia of ownership held primarily for investment purposes, nor ownership indicia held primarily for purposes other than as protection for a security interest. A holder may have other, secondary reasons for maintaining indicia of ownership, but the primary reason why any ownership indicia are held must be as protection

for a security interest.

b. “Security interest” means an interest in a petroleum underground storage tank or underground storage tank system or in the facility or property on which a petroleum underground storage tank or underground storage tank system is located, created or established for the purpose of securing a loan or other obligation. Security interests include but are not limited to mortgages, deeds of trusts, liens, and title pursuant to lease financing transactions. Security interests may also arise from transactions such as sale and leasebacks, conditional sales, installment sales, trust receipt transactions, certain assignments, factoring agreements, accounts receivable financing arrangements, and consignments, if the transaction creates or establishes an interest in an underground storage tank or underground storage tank system or in the facility or property on which the underground storage tank or underground storage tank system is located, for the purpose of securing a loan or other obligation.

7. “Underground storage tank technical standards”, as used in sections 33.1-24-08-115 through 33.1-24-08-130, refers to the underground storage preventative and operating requirements under sections 33.1-24-08-10 through 33.1-24-08-35, sections 33.1-24-08-60 through 33.1-24-08-64, and section 33.1-24-08-40.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-116. [Reserved]

33.1-24-08-117. [Reserved]

33.1-24-08-118. [Reserved]

33.1-24-08-119. [Reserved]

33.1-24-08-120. Participation in management (lender liability). The term “participating in the management of an underground storage tank or underground storage tank system” means that, subsequent to December 6, 1995, the holder was engaging in decisionmaking control of, or activities related to, operation of the underground storage tank or underground storage tank system, as defined herein.

1. Actions that are participation in management.

a. Participation in the management of an underground storage tank or underground storage tank system means, for purposes of sections 33.1-24-08-115 through 33.1-24-08-130, actual participation by the holder in the management or control of decisionmaking related to the operation of an underground storage tank or underground storage tank system. Participation in management does not include the mere capacity or ability to influence or the unexercised right to control underground storage tank or

underground storage tank system operations. A holder is participating in the management of the underground storage tank or underground storage tank system only if the holder either:

(1) Exercises decisionmaking control over the operational (as opposed to financial or administrative) aspects of the underground storage tank or underground storage tank system, such that the holder has undertaken responsibility for all or substantially all of the management of the underground storage tank or underground storage tank system; or

(2) Exercises control at a level comparable to that of a manager of the borrower's enterprise, such that the holder has assumed or manifested responsibility for the overall management of the enterprise encompassing the day-to-day decisionmaking of the enterprise with respect to all, or substantially all, of the operational (as opposed to financial or administrative) aspects of the enterprise.

b. Operational aspects of the enterprise relate to the use, storage, filling, or dispensing of petroleum contained in an underground storage tank or underground storage tank system, and include functions such as that of a facility or plant manager, operations manager, chief operating officer, or chief executive officer. Financial or administrative aspects include functions such as that of a credit manager, personnel manager, controller, chief financial officer, or similar functions. Operational aspects of the enterprise do not include the financial or administrative aspects of the enterprise, or actions associated with environmental compliance, or actions undertaken voluntarily to protect the environment in accordance with applicable requirements in chapter 33.1-24-08.

2. Actions that are not participation in management preforeclosure.

a. Actions at the inception of the loan or other transaction. No act or omission prior to the time that indicia of ownership are held primarily to protect a security interest constitutes evidence of participation in management within the meaning of sections 33.1-24-08-115 through 33.1-24-08-130. A prospective holder who undertakes or requires an environmental investigation (which could include one or more of the following: a site assessment, inspection, or audit) of the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located (in which indicia of ownership are to be held), or requires a prospective borrower to clean up contamination from the underground storage tank or underground storage tank system or to comply or come into compliance (whether prior or subsequent to the time that indicia of ownership are held primarily to protect a security interest) with any applicable law or regulation, is not by such action considered to be participating in the management of the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground

storage tank system is located.

b. Loan policing and work out. Actions that are consistent with holding ownership indicia primarily to protect a security interest do not constitute participation in management for purposes of sections 33.1-24-08-115 through 33.1-24-08-130. The authority for the holder to take such actions may, but need not, be contained in contractual or other documents specifying requirements for financial, environmental, and other warranties, covenants, conditions, representations or promises from the borrower. Loan policing and work out activities cover and include all such activities up to foreclosure, exclusive of any activities that constitute participation in management.

(1) Policing the security interest or loan.

(a) A holder who engages in policing activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the underground storage tank or underground storage tank system as provided in subsection 1. Such policing actions include, but are not limited to, requiring the borrower to clean up contamination from the underground storage tank or underground storage tank system during the term of the security interest; requiring the borrower to comply or come into compliance with applicable federal, state, and local environmental and other laws, rules, and regulations during the term of the security interest; securing or exercising authority to monitor or inspect the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located (including onsite inspections) in which indicia of ownership are maintained, or the borrower's business or financial condition during the term of the security interest; or taking other actions to adequately police the loan or security interest (such as requiring a borrower to comply with any warranties, covenants, conditions, representations, or promises from the borrower).

(b) Policing activities also include undertaking by the holder of underground storage tank environmental compliance actions and voluntary environmental actions taken in compliance with chapter 33.1-24-08, provided that the holder does not otherwise participate in the management or daily operation of the underground storage tank or underground storage tank system as provided in subsection 1 of section 33.1-24-08-120 and section 33.1-24-08-130. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of an

underground storage tank or underground storage tank system, underground storage tank upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in chapter 33.1-24-08. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the underground storage tank or underground storage tank system.

(2) Loan work out. A holder who engages in work out activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the underground storage tank or underground storage tank system as provided in subsection 1. For purposes of this rule, "work out" refers to those actions by which a holder, at any time prior to foreclosure, seeks to prevent, cure, or mitigate a default by the borrower or obligor; or to preserve, or prevent the diminution of, the value of the security. Work out activities include, but are not limited to, restructuring or renegotiating the terms of the security interest; requiring payment of additional rent or interest; exercising forbearance; requiring or exercising rights pursuant to an assignment of accounts or other amounts owing to an obligor; requiring or exercising rights pursuant to an escrow agreement pertaining to amounts owing to an obligor; providing specific or general financial or other advice, suggestions, counseling, or guidance; and exercising any right or remedy the holder is entitled to by law or under any warranties, covenants, conditions, representations, or promises from the borrower.

3. Foreclosure on an underground storage tank or underground storage tank system or facility or property on which an underground storage tank or underground storage tank system is located, and participation in management activities postforeclosure.

a. Foreclosure.

(1) Indicia of ownership that are held primarily to protect a security interest include legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. For purposes of sections 33.1-24-08-115 through 33.1-24-08-130, the term "foreclosure" means that legal, marketable or equitable title or deed has been issued, approved, and recorded, and that the holder has obtained access to the underground storage tank, or underground storage tank system, underground storage tank facility, and property on which the underground storage tank or underground storage tank system is located, provided that the holder acted diligently to acquire marketable title or deed and to gain access to

the underground storage tank, underground storage tank system, underground storage tank facility, and property on which the underground storage tank or underground storage tank system is located. The indicia of ownership held after foreclosure continue to be maintained primarily as protection for a security interest provided that the holder undertakes to sell, release an underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, held pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or otherwise divest itself of the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, in a reasonably expeditious manner, using whatever commercially reasonable means are relevant or appropriate with respect to the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, taking all facts and circumstances into consideration, and provided that the holder does not participate in management as defined in subsection 1 prior to or after foreclosure.

(2) For purposes of establishing that a holder is seeking to sell, release pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or divest in a reasonably expeditious manner an underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, the holder may use whatever commercially reasonable means as are relevant or appropriate with respect to the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, or may employ the means specified in subdivision b of subsection 3. A holder that outbids, rejects, or fails to act upon a written bona fide, firm offer of fair consideration for the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, as provided in subdivision b of subsection 3, is not considered to hold indicia of ownership primarily to protect a security interest.

b. Holding foreclosed property for disposition and liquidation. A holder, who does not participate in management prior to or after foreclosure, may sell, release, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), an underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, liquidate, wind up operations, and take measures, prior to sale or

other disposition, to preserve, protect, or prepare the secured underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located. A holder may also arrange for an existing or new operator to continue or initiate operation of the underground storage tank or underground storage tank system. The holder may conduct these activities without voiding the security interest exemption, subject to the requirements of sections 33.1-24-08-115 through 33.1-24-08-130.

- (1) A holder establishes that the ownership indicia maintained after foreclosure continue to be held primarily to protect a security interest by, within twelve months following foreclosure, listing the underground storage tank or underground storage tank system or the facility or property on which the underground storage tank or underground storage tank system is located, with a broker, dealer, or agent who deals with the type of property in question, or by advertising the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, as being for sale or disposition on at least a monthly basis in either a real estate publication or a traded or other publication suitable for the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, or a newspaper of general circulation (defined as one with a circulation more than ten thousand, or one suitable under any applicable federal, state, or local rules of court for publication required by court order or rules of civil procedure) covering the location of the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located. For purposes of this provision, the twelve-month period begins to run from December 6, 1995, or from the date that the marketable title or deed has been issued, approved and recorded, and the holder has obtained access to the underground storage tank or underground storage tank system, underground storage tank facility and property on which the underground storage tank or underground storage tank system is located, whichever is later, provided that the holder acted diligently to acquire marketable title or deed and to obtain access to the underground storage tank or underground storage tank system, underground storage tank facility and property on which the underground storage tank or underground storage tank system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the underground storage tank or underground storage tank system, the twelve-month period begins to run from December 6, 1995, or from the date on which the holder first acquires either title to or possession of the secured underground storage tank or underground storage tank system, or facility or property on which the underground storage tank or underground storage tank system is located, whichever is later.

(2) A holder that outbids, rejects, or fails to act upon an offer of fair consideration for the underground storage tank or underground storage tank system or the facility or property on which the underground storage tank or underground storage tank system is located, establishes by such outbidding, rejection, or failure to act, that the ownership indicia in the secured underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located are not held primarily to protect the security interest, unless the holder is required, in order to avoid liability under federal or state law, to make a higher bid, to obtain a higher offer, or to seek or obtain an offer in a different manner.

(a) Fair consideration, in the case of a holder maintaining indicia of ownership primarily to protect a senior security interest in the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, is the value of the security interest as defined in this section. The value of the security interest includes all debt and costs incurred by the security interest holder, and is calculated as an amount equal to or in excess of the sum of the outstanding principal (or comparable amount in the case of a lease that constitutes a security interest) owed to the holder immediately preceding the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure, plus any unpaid interest, rent, or penalties (whether arising before or after foreclosure). The value of the security interest also includes all reasonable and necessary costs, fees, or other charges incurred by the holder incident to work out, foreclosure, retention, preserving, protecting, and preparing, prior to sale, the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, release, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), of an underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, or other disposition. The value of the security interest also includes environmental investigation costs (which could include one or more of the following: a site assessment, inspection, or audit of the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located), and corrective action costs incurred under sections 33.1-24-08-41 through 33.1-24-08-57, or

any other costs incurred as a result of reasonable efforts to comply with any other applicable federal, state or local law or regulation; less any amounts received by the holder in connection with any partial disposition of the property and any amounts paid by the borrower (if not already applied to the borrower's obligations) subsequent to the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure. In the case of a holder maintaining indicia of ownership primarily to protect a junior security interest, fair consideration is the value of all outstanding higher priority security interests plus the value of the security interest held by the junior holder, each calculated as set forth in this subparagraph.

- (b) Outbids, rejects, or fails to act upon an offer of fair consideration means that the holder outbids, rejects, or fails to act upon within ninety days of receipt, a written, bona fide, firm offer of fair consideration for the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located received at any time after six months following foreclosure, as defined in subsection 3. A "written, bona fide, firm offer" means a legally enforceable, commercially reasonable, cash offer solely for the foreclosed underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, including all material terms of the transaction, from a ready, willing, and able purchaser who demonstrates to the holder's satisfaction the ability to perform. For purposes of this provision, the six-month period begins to run from December 6, 1995, or from the date that marketable title or deed has been issued, approved and recorded to the holder, and the holder has obtained access to the underground storage tank or underground storage tank system, underground storage tank facility and property on which the underground storage tank or underground storage tank system is located, whichever is later, provided that the holder was acting diligently to acquire marketable title or deed or to gain access to the underground storage tank or underground storage tank system, underground storage tank facility and property on which the underground storage tank or underground storage tank system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the underground storage tank or underground storage tank system, the six-month period begins to run from December 6, 1995, or from the date on which the holder first acquires either title to or possession of the secured underground storage tank or underground storage tank system, or facility or property on which the

underground storage tank or underground storage tank system is located, whichever is later.

- c. Actions that are not participation in management postforeclosure. A holder is not considered to be participating in the management of an underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located when undertaking actions under chapter 33.1-24-08, provided that the holder does not otherwise participate in the management or daily operation of the underground storage tank or underground storage tank system as provided in subsection 1 of section 33.1-24-08-120 and section 33.1-24-08-130. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of the underground storage tank or underground storage tank system, underground storage tank upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in chapter 33.1-24-08. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the underground storage tank or underground storage tank system.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-121. [Reserved]

33.1-24-08-122. [Reserved]

33.1-24-08-123. [Reserved]

33.1-24-08-124. [Reserved]

33.1-24-08-125. Ownership of an underground storage tank or underground storage tank system or facility or property on which an underground storage tank or underground storage tank system is located (lender liability). A holder is not an “owner” of a petroleum underground storage tank or underground storage tank system or facility or property on which a petroleum underground storage tank or underground storage tank system is located for purposes of compliance with the underground storage tank technical standards as defined in subsection 1, the underground storage tank corrective action requirements under sections 33.1-24-08-41 through 33.1-24-08-57, and the underground storage tank financial responsibility requirements under sections 33.1-24-08-80 33.1-24-08-101, provided the person:

1. Does not participate in the management of the underground storage tank or underground storage tank system as defined in section 33.1-24-08-120; and
2. Does not engage in petroleum production, refining, and marketing as defined in subsection 2 of section 33.1-24-08-115.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

33.1-24-08-126. [Reserved]

33.1-24-08-127. [Reserved]

33.1-24-08-128. [Reserved]

33.1-24-08-129. [Reserved]

33.1-24-08-130. Operating an underground storage tank or underground storage tank system (lender liability).

1. Operating an underground storage tank or underground storage tank system prior to foreclosure. A holder, prior to foreclosure, as defined in subsection 3 of section 33.1-24-08-120, is not an “operator” of a petroleum underground storage tank or underground storage tank system for purposes of compliance with the underground storage tank technical standards as defined in subsection 1 of section 33.1-24-08-115, the underground storage tank corrective action requirements under sections 33.1-24-08-41 through 33.1-24-08-57, and the underground storage tank financial responsibility requirements under sections 33.1-24-08-80 through 33.1-24-08-101, provided that, after December 6, 1995, the holder is not in control of or does not have responsibility for the daily operation of the underground storage tank or underground storage tank system.

2. Operating an underground storage tank or underground storage tank system after foreclosure. The following provisions apply to a holder who, through foreclosure, as defined in subsection 3 of section 33.1-24-08-120, acquires a petroleum underground storage tank or underground storage tank system or facility or property on which a petroleum underground storage tank or underground storage tank system is located.
 - a. A holder is not an “operator” of a petroleum underground storage tank or underground storage tank system for purposes of compliance with chapter 33.1-24-08 if there is an operator, other than the holder, who is in control of or has responsibility for the daily operation of the underground storage tank or underground storage tank system, and who can be held responsible for compliance with applicable requirements of chapter 33.1-24-08.

 - b. If another operator does not exist, as provided for under subdivision a, a holder is not an “operator” of the underground storage tank or underground storage tank system, for purposes of compliance with the underground storage tank technical standards as defined in subsection 1 of section 33.1-24-08-115, the underground storage tank corrective action requirements under sections 33.1-24-08-41 through 33.1-24-08-57, and the underground storage tank financial responsibility requirements under sections 33.1-24-08-80 through 33.1-24-08-101, provided that the holder:

(1) Empties all of its known underground storage tanks or underground storage tank systems within sixty calendar days after foreclosure or within sixty calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the department, so that no more than two and one-half centimeters [1 inch] of residue, or three-tenths of one percent [0.3] by weight of the total capacity of the underground storage tank system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment; and

(2) Empties those underground storage tanks and underground storage tank systems that are discovered after foreclosure within sixty calendar days after discovery or within sixty calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the department, so that no more than two and one-half centimeters [1inch] of residue, or three-tenths of one percent [0.3] by weight of the total capacity of the underground storage tank system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment.

c. If another operator does not exist, as provided for under subdivision a, in addition to satisfying the conditions under subdivision b, the holder must either:

(1) Permanently close the underground storage tank or underground storage tank system in accordance with sections 33.1-24-08-61 through 33.1-24-08-64, except subsection 2 of section 33.1-24-08-62; or

(2) Temporarily close the underground storage tank or underground storage tank system in accordance with the following applicable provisions of section 33.1-24-08-60:

(a) Continue operation and maintenance of corrosion protection in accordance with section 33.1-24-08-21;

(b) Report suspected releases to the department; and

(c) Conduct a site assessment in accordance with subsection 1 of section 33.1-24-08-62 if the underground storage tank system is temporarily closed for more than twelve months and the underground storage tank system does not meet either the performance standards in section 33.1-24-08-10 for new underground storage tank systems or the upgrading requirements in section 33.1-24-08-11, except that the spill and overfill equipment requirements do not have to be met.

The holder must report any suspected releases to the department. For purposes of this provision, the twelve-month period begins to run December 6, 1995, or from the date on which the underground storage tank system is emptied and secured under subdivision b, whichever is later.

- d. The underground storage tank system can remain in temporary closure until a subsequent purchaser has acquired marketable title to the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located. Once a subsequent purchaser acquires marketable title to the underground storage tank or underground storage tank system or facility or property on which the underground storage tank or underground storage tank system is located, the purchaser must decide whether to operate or close the underground storage tank or underground storage tank system in accordance with applicable requirements in chapter 33.1-24-08.

History: Effective _____, 2018.

General Authority: NDCC 23.1-04-03, 23.1-04-06; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-04-06; S.L. 2017, ch. 199, § 19

Appendix I

NOTE: The NOTIFICATION FOR UNDERGROUND STORAGE TANKS SFN 10980 form can be found at <https://deq.nd.gov/Forms/WM/NotificationForUndergroundStorageTanks.pdf> or can be requested by contacting the NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WASTE MANAGEMENT - UST PROGRAM at 918 E Divide Ave, Bismarck ND 58501-1947, calling 701-328-5166 or emailing ndust@nd.gov

Appendix II

NOTE: A federal law (the Resource Conservation and Recovery Act (RCRA), as amended (Pub.L. 98-616)) requires owners of certain underground storage tanks to notify designated state or local agencies by May 8, 1986, of the existence of their tanks. Notifications for tanks brought into use after May 8, 1986, must be made within thirty days. Consult the environmental protection agency's regulations, issued on November 8, 1985, (40 CFR part 280) to determine if you are affected by this law.

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

ARTICLE 33.1-34 IS CREATED AS FOLLOWS, SUBJECT TO THE CONTINGENCY IN S.L.
2017, CH. 199, 75:

ARTICLE 33.1-34
PETROLEUM AND FUEL PRODUCTS

Chapter

33.1-34-01 Specifications and Standards for Petroleum Products

CHAPTER 33.1-34-01
SPECIFICATIONS AND STANDARDS FOR PETROLEUM AND FUEL PRODUCTS

Section

33.1-34-01-01 Analytical Specifications

33.1-34-01-02 Labeling Specifications

33.1-34-01-01. Analytical specifications.

1. **Petroleum and fuel product specifications.** Petroleum and fuel products including gasoline, alcohol-blended gasoline, diesel, tractor fuel, fuel oil (heating oil), kerosene, biodiesel, biodiesel blends, and all other alternative fuels shall comply with the most current applicable specifications of American society for testing and materials (ASTM), which are found in section 5 - petroleum products, lubricants, and fossil fuels of that organization's publication "Annual Book of ASTM Standards" and supplements thereto or revisions thereof as may be designated by ASTM, except as modified or rejected by this chapter or any rule promulgated pursuant to chapter 19-10 of the North Dakota Century Code. If gasoline is blended with ethanol, it shall be blended under any of the following three options:
 - a. The base gasoline used in such blends shall meet the requirements of ASTM D4814;
 - b. The blend shall meet the requirements of ASTM D4814; or
 - c. The base gasoline used in such blends shall meet all the requirements of ASTM D4814 except distillation, and the blend shall meet the distillations requirements of the ASTM specification.

The volatility standards for blends of gasoline and ethanol shall be the same as those adopted under the rules, regulations, and Clean Air Act waivers of the environmental protection agency of the United States department of the interior. Fuel products shall not be blended at a retail location with products commonly and commercially known as casing head gasoline, absorption gasoline, condensation gasoline, drip gasoline, or natural gasoline.

2. **Ethanol specifications.** The denatured ethanol at the time of blending with gasoline shall conform to the most recent version of ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel", except as modified or rejected by this chapter or any rule promulgated pursuant to chapter 19-10 of the North Dakota Century Code.
3. **Permissible levels of alcohol.** The maximum permitted level or levels of ethanol, methanol, or other alcohol, in gasoline or alcohol-blended gasoline must be in accord with any levels as

established by the environmental protection agency of the United States department of the interior. Any blender or wholesaler distributing a gasoline containing methanol which has been granted an exemption or waiver by the environmental protection agency in reference to this section shall inform the department of environmental quality and the retailer of the blended product of this exemption or waiver in writing prior to distribution.

History: Effective _____, 2018.

General Authority: NDCC 23.1-13-12, 23.1-13-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-13-12; S.L. 2017, ch. 199, § 28

33.1-34-01-02. Labeling specifications.

1. **Posted octane rating.** The posted octane rating of a gasoline or alcohol-blended gasoline is the mathematical average of the octane as determined by the ASTM D2699 Research Method engine test and the octane as determined by the ASTM D2700 Motor Method engine test.

a. The posted octane rating must be conspicuously placed on the dispenser's front panel in a type not less than one inch [2.54 centimeters] high.

b. Only gasoline or alcohol-blended gasoline with a posted octane rating greater than or equal to ninety-one may be labeled "premium", "supreme", or "high test".

c. Only gasoline or alcohol-blended gasoline with a posted octane rating greater than or equal to eighty-nine may be labeled "super", "plus", or "midgrade".

d. Octane of unleaded and leaded gasoline or alcohol-blended gasoline must be at least eighty-seven. Unleaded gasoline or alcohol-blended gasoline means that gasoline or alcohol-blended gasoline produced without the intentional use of any lead additive and which contains not more than five one-hundredths grams of lead per gallon and not more than five one-thousandths grams of phosphorus per gallon. Leaded gasoline or alcohol-blended gasoline means gasoline or alcohol-blended gasoline which contains more than five one-thousandths grams of phosphorus per gallon, or any fuel to which lead or phosphorus is intentionally added.

2. Alcohol-blended gasolines.

a. All gasoline or alcohol-blended gasoline sold or offered for sale containing ethanol, methanol, or cosolvent alcohol, or any combination thereof, shall be labeled with the conventional name or names of the alcohol contained in the gasoline or alcohol-blended gasoline if the gasoline or alcohol-blended gasoline consists of one percent or more by volume of any alcohol or combinations of alcohols. The label must be on any price advertising and the dispenser's front panel next to the gasoline or alcohol-blended gasoline grade label in a position that is clear and conspicuous from the driver's position. The dispensing unit label shall also identify the maximum percentage by volume, to the nearest whole percent, of ethanol, methanol, or cosolvent alcohol, or any combination thereof contained in the gasoline or alcohol-blended gasoline. If gasoline or alcohol-blended gasoline consists of one percent or more by volume of ethanol, the dispensing unit shall bear the ethanol promotion and information council label or logo.

b. Maximum percentage of methanol and cosolvent alcohol must both be conspicuously displayed or labeled if the product contains three percent or more by volume of methanol.

c. No person may sell gasoline or alcohol-blended gasoline in any manner, including coloring, which shall deceive, tend to deceive, or has the effect of deceiving the purchaser as to grade or type.

d. Suppliers of alcohol-blended gasoline to retail service stations or to other resuppliers must provide to the retailer or other reseller an invoice or delivery ticket indicating to within one percentage point the specific content by volume of any alcohol contained if the gasoline or alcohol-blended gasoline consists of one percent or more by volume of any alcohol or combinations of alcohols. This information must be made readily available to the consumer of an alcohol-blended gasoline.

3. **Gasoline grade designations.** All gasolines or alcohol-blended gasolines sold or offered for sale must bear on the dispenser's front panel and on any price advertising the appropriate leaded or lead-free grade designation. This label must be posted in a position that is clear and conspicuous from the driver's position.

4. **Biodiesel.**

a. Biodiesel and biodiesel blends shall be identified by the capital letter "B" followed by the numerical value representing the volume percentage of biodiesel fuel.

b. Each retail dispenser of biodiesel blend containing more than five percent and up to and including twenty percent biodiesel shall be labeled with either the capital letter "B" followed by the numerical value representing the volume percentage of biodiesel fuel and ending with "biodiesel blend" or the phrase "biodiesel blend between 5% and 20%" or similar words.

c. Each retail dispenser of biodiesel or biodiesel blend containing more than twenty percent biodiesel shall be labeled with the capital letter "B" followed by the numerical value representing the volume percentage of biodiesel fuel and ending with either "biodiesel" or "biodiesel blend".

d. Suppliers of biodiesel or biodiesel blend to retail service stations or to other resuppliers must provide to the retailer or reseller a declaration of the volume percent biodiesel on an invoice or delivery ticket. This documentation is for dispenser labeling purposes only. It is the responsibility of any potential blender to determine the amount of biodiesel in the diesel fuel prior to blending.

History: Effective _____, 2018.

General Authority: NDCC 23.1-13-12, 23.1-13-02; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 23.1-13-12; S.L. 2017, ch. 199, § 28

NORTH DAKOTA DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH SECTION CHIEF
ON BEHALF OF THE
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Article 33.1-35 is created as follows, subject to the contingency in S.L. 2017, ch. 199, 75:

ARTICLE 33.1-35
REVOLVING LOAN FUND

Chapter

33.1-35-01 State Water Pollution Control Revolving Fund

CHAPTER 33.1-35-01
STATE WATER POLLUTION CONTROL REVOLVING FUND

Section

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33.1-35-01-01. Definitions.

For the purpose of this chapter, the following definitions apply:

1. "Act" means the federal Water Pollution Control Act of 1972, Public Law 92-500, as amended by the Water Quality Act of 1987 [Pub. L. 100-4; 33 U.S.C. 1251-1376].
2. "Bank of North Dakota" means the Bank of North Dakota as created by the North Dakota Century Code chapter 6-09.
3. "Public finance authority" means the North Dakota public finance authority created by North Dakota Century Code chapter 6-09.4, or a public body and instrumentality of the state which succeeds to the powers, duties, and functions of the bond bank.
4. "Construction" means the erection, acquisition, alteration, reconstruction, improvement, or extension of wastewater treatment works or section 319 projects, including preliminary planning

to determine the economic feasibility, the engineering, architectural, legal, fiscal, and economic investigations and studies, surveys, designs, plans, procedures, and other similar action necessary in the building and inspection supervision of the construction of wastewater treatment works or section 319 projects.

5. "Department" means the department of environmental quality.

6. "Director" means the director of the division of municipal facilities, the department of environmental quality.

7. "Facility plan" means an engineering evaluation of present and future treatment needs, an evaluation of several treatment alternatives, and the selection and justification of a final treatment alternative.

8. "Financial agent" means the North Dakota public finance authority or such other agent as the department selects.

9. "Financial assistance" means the lending of funds from the state revolving fund by the department and its financial agent to a political subdivision through the purchase of its bond, note, warrant, or other evidence of indebtedness issued to finance or refinance all or part of the construction of wastewater treatment works or section 319 projects. Financial assistance also includes all other forms of eligible assistance under the Act.

10. "Intended use plan" means a document prepared annually by the department on behalf of the state which provides assurances and specific proposals, including a list of potential projects eligible for assistance from the state revolving fund and a federal payment schedule.

11. "Political subdivision" means any municipality, intermunicipal or interstate agencies, or any other entity constituting a political subdivision under the laws of North Dakota.

12. "Project cost" means the cost of construction of wastewater treatment works and the capitalized interest necessary for the construction financing.

13. "Section 319 project" means a project authorized and undertaken in conformance with section 319 of the Act [33 U.S.C. 1329] that uses some form of land treatment, watershed treatment, or best management practices to improve water quality.

14. "State revolving fund" means the state water pollution control revolving loan fund as established in North Dakota Century Code chapter 61-28.2.

15. "Wastewater treatment works" means a facility used for the disposal of pollutants which may include, but is not limited to, wastewater treatment facilities, infiltration or inflow correction, major sewer system rehabilitation, new collector sewers, new interceptors and appurtenances, combined sewer correction, and storm sewer projects.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-02. Eligibility.

1. A political subdivision is eligible for financial assistance under the state revolving fund if its project is included in the current intended use plan.

2. Loans may be made only to political subdivisions that:

a. Demonstrate tangible financial capability to assure sufficient revenues to operate and maintain the facility for its useful life and to repay the loan.

- b. Establish an acceptable method of repayment of the loan.
- c. Agree to maintain financial records in accordance with governmental accounting standards and to conduct an annual audit of the facility's financial records.
- d. Provide such assurances as are required by the Act and as reasonably requested by the department.
- e. Provide a department approved facility plan.

3. Financial assistance may be awarded for projects included in the intended use plan for the following activities:

- a. The financing or refinancing of construction or other assistance of publicly owned wastewater treatment works as defined in section 212 of the Act that appear on North Dakota's project priority list and included in the intended use plan. This includes planning, design, and construction of storm sewers after September 30, 1990; or
- b. Implementation of a nonpoint source pollution control management program under section 319 of the Act.
- c. Operation and maintenance manual preparation and operator startup training.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-03. Refinancing.

Loans may be made to political subdivisions to refinance existing debt obligations if they were incurred and building was initiated after March 7, 1985, and if the debts were used to finance projects identified in the intended use plan. In addition, the projects must satisfy the statutory requirements contained in section 602(b)(6) of the Act.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-04. Intended use plan.

The department will annually prepare a wastewater treatment works construction priority list according to the department's review and point award. All proposed wastewater treatment works must be on the priority list in order to be funded under the state revolving fund program. It is not necessary for section 319 projects to be on the priority list, but they must appear in the intended use plan. The priority list must also be incorporated into the annual intended use plan.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-05. Annual public hearing on proposed intended use plan.

Upon tentative completion of the annual revision of the intended use plan, the department shall conduct a hearing to receive oral and written comments from the public on the proposed intended use plan. At least thirty calendar days' notice must be given of the public hearing in at least two newspapers of general circulation in different parts of the state. Written comments must be accepted during this period. After all comments are received, the department shall compile and adopt the final list at the hearing.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-06. Emergency amendment of intended use plan.

The department may add a project to the intended use plan, by emergency amendment, if the proposed project will alleviate or mitigate a dire physical threat to the health and safety of persons or if the proposed project is necessary to take advantage of an unexpected economic development opportunity which will be lost unless action is taken. Economic opportunity considerations will not be the primary focus of any state revolving fund project. The primary considerations in every project will be public health, water quality, and public safety issues.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-07. Project priority list removal procedure.

The department may remove a project from the intended use plan if the project has been fully funded or the project is no longer eligible under the priority system or the political subdivision responsible for the project has expressed in writing no interest in the program.

History: Effective _____, 2018.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-08. Project bypass procedure.

The department may bypass the priority established for funding as follows:

1. The political subdivision being bypassed provides to the state a written statement endorsing the bypass; or
2. The political subdivision being bypassed fails to submit information within the timeframe required by written notice from the department.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-09. Deadline for application.

Project assistance applications may be submitted at any time by eligible political subdivisions.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-10. Reserve for section 319 nonpoint source management projects.

The department may set aside a portion of the available funds for section 319 nonpoint source projects for the first six months of each fiscal year. The amount of the set-aside must be determined by the department.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-11. Application procedure.

The application procedure will be designed by the department and approved by the environmental protection agency to include all necessary requirements as contained in the Act and applicable federal regulations, state laws, and rules. The application procedure will be contained in the state revolving fund procedures handbook.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-12. Loan agreement.

1. The loan agreement will be a legally binding contract between the financial agent and the political subdivision. The agreement will contain general conditions and may, if necessary, contain special conditions.
2. The general conditions of a loan agreement will include the requirements of laws, rules, and policies of the state of North Dakota.
3. The special conditions of the loan agreement will relate to specific provisions unique for an individual project including, but not limited to, time schedules and performance requirements and such other requirements as are reasonably requested by the financial agent.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-13. Release.

By its acceptance of the loan agreement, the political subdivision releases and discharges the department, its officers, agents (including its financial agent), and employees from all liabilities, obligations, and claims arising out of the project work under the loan agreement.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-14. Loan amendments.

The loan agreement may be amended in writing according to the terms of the respective loan agreement including, but not limited to, an amendment when the amount of loan funds necessary to pay project costs are greater than the original amount in the loan agreement.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-15. Inspections.

During the building of the project, the political subdivision shall provide inspection services sufficient to ensure that the project is constructed in accordance with approved plans and specifications. The department will conduct interim project inspections to determine compliance with approved plans and specifications and loan agreement, as appropriate.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-16. Loan default.

The political subdivision must agree that upon default in the payments of principal and accrued interest on the loan or in the performance of any covenant or condition of the loan agreement, the department, through its financial agent, may at its option, do one or more of the following:

1. Declare immediately due and payable the entire principal amount then outstanding and the accrued interest;
2. Incur and pay reasonable expenses, through the account of the political subdivision, for repair, maintenance, and operation of the facility, and other expenses necessary to cure the cause of default; or
3. Proceed to enforce payment of such interest or principle or other amount then due and payable pursuant to applicable provisions of law or loan agreement.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-17. Financing method.

1. A loan shall be made for a period of time not to exceed thirty years or the design life of the wastewater treatment works facility, whichever is shorter.
2. Interest on the loan accrues and must be paid as provided in the loan agreement.
3. All repayment schedules must be established by the terms and conditions of the loan agreement. The repayment by the political subdivision of the loan will begin within one year after the project is capable of operation or:
 - a. For special assessment warrants, upon a date which is sufficient to allow time for special assessments to be spread in the tax levy year for the political subdivision; and
 - b. For revenue bonds, at the time specified in the respective loan agreement which shall reasonably attempt to begin after the project is in full operation.

In all cases, repayments must begin within one year after the project is capable of operation.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-18. Interest rate determination.

The interest rate on a loan will be determined by the department with consultation from the financial agent and must be based on the combined costs related to the total financial state revolving fund loan package. The interest rates on individual loans may vary, however, the rate will not exceed the interest rate generally available for a comparable financing at the time the rate is established.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1
Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-19. Amount of financial assistance.

A political subdivision may apply for any amount of financial assistance. The department may award less than the amount requested in the application. In determining the financial assistance for each political subdivision, the department may consider the proposed construction and the proposed project costs of such activities, the resources available to the department within the state revolving fund, and the ability to carry out the proposed project, including the ability to repay the financial assistance.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-20. Files and records.

All files and records pertaining to the project must be maintained by the political subdivision throughout the project and made accessible to the department and the environmental protection agency and their agents according to state and federal law. These files and records must be retained by the political subdivision for at least three years beyond the term of the loan.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70

33.1-35-01-21. Reservation of rights.

1. Nothing in this chapter prohibits a political subdivision from requiring more assurances, guarantees, indemnity, or other contractual requirements from any party performing project work.
2. Nothing in this chapter affects the department's right to take remedial action, including, but not limited to, administrative enforcement action and actions for breach of contract against a political subdivision that fails to carry out its obligations under this chapter. Any remedial action contemplated by the department or its financial agent will be coordinated with the best interests of the state revolving fund.
3. Review or approval of facility plans, design drawings and specifications, or other documents by or for the department, does not relieve the political subdivision of its responsibility to properly plan, design, build, and effectively operate and maintain the treatment works as required by state or federal law, permits, the loan agreement, and good management practices. The department is not responsible for increased costs resulting from defects in the plans, design drawings and specifications, or other subagreement documents.

History: Effective _____, 2018.

General Authority: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 1

Law Implemented: NDCC 61-28.2-01; S.L. 2017, ch. 199, § 70