# CHAPTER 33.1-24-02
# IDENTIFICATION AND LISTING OF HAZARDOUS WASTE


Section
33.1-24-02-01 Purpose and Scope
33.1-24-02-02 Definition of Solid Waste
33.1-24-02-03 Definition of Hazardous Waste
33.1-24-02-04 Exclusions
33.1-24-02-05 Special Requirements for Hazardous Waste Generated by Very Small Quantity Generators [Repealed]
33.1-24-02-06 Requirements for Recyclable Materials and Universal Waste
33.1-24-02-07 Residues of Hazardous Wastes in Empty Containers
33.1-24-02-08 Criteria for Identifying the Characteristics of Hazardous Waste
33.1-24-02-09 Criteria for Listing Hazardous Waste
33.1-24-02-10 General Characteristics of Hazardous Waste
33.1-24-02-11 Characteristic of Ignitability
33.1-24-02-12 Characteristic of Corrosivity
33.1-24-02-13 Characteristic of Reactivity
33.1-24-02-14 Toxicity Characteristic
33.1-24-02-15 Lists of Hazardous Wastes
33.1-24-02-16 Hazardous Waste From Nonspecific Sources
33.1-24-02-17 Hazardous Waste From Specific Sources
33.1-24-02-18 Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof
33.1-24-02-19 Deletion of Certain Hazardous Waste Codes Following Equipment Cleaning and Replacement
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
33.1-24-02-26 Conditional Exclusion for Used, Intact Cathode Ray Tubes Exported for Recycling
33.1-24-02-27 Notification and Recordkeeping for Used, Intact Cathode Ray Tubes Exported for Reuse
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
33.1-24-02-34 Definitions of Terms as Used in Sections 33.1-24-02-33 Through 33.1-24-02-42
33.1-24-02-35 Cost Estimate for Closure
33.1-24-02-36 Financial Assurance Condition
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
33.1-24-02-41 Incapacity of Owners or Operators, Guarantors, or Financial Institutions
33.1-24-02-42 Wording of the Instruments
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
33.1-24-02-51 Conditions of Containers
33.1-24-02-52 Compatibility of Hazardous Secondary Materials With Containers
33.1-24-02-53 Management of Containers
33.1-24-02-54 [Reserved]
33.1-24-02-55 Containment
33.1-24-02-56 Special Requirements for Ignitable or Reactive Hazardous Secondary Material
33.1-24-02-57 Special Requirements for Incompatible Materials
33.1-24-02-58 [Reserved]
33.1-24-02-59 Air Emission Standards
33.1-24-02-60 Applicability of Tank Requirements
33.1-24-02-61 Assessment of Existing Tank System's Integrity
33.1-24-02-62 [Reserved]
33.1-24-02-63 Containment and Detection of Releases
33.1-24-02-64 General Operating Requirements
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
33.1-24-02-67 Termination of Remanufacturing Exclusion
33.1-24-02-68 Special Requirements for Ignitable or Reactive Materials
33.1-24-02-69 Special Requirements for Incompatible Materials
33.1-24-02-70 Air Emission Standards
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
33.1-24-02-121 Preparedness and Prevention
33.1-24-02-122 Emergency Procedures for Facilities Generating or Accumulating of Six Thousand Kilograms or Less of Hazardous Secondary Material
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
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
33.1-24-02-171 Definitions
33.1-24-02-172 Standards - Process Vents
33.1-24-02-173 Standards - Closed-Vent Systems and Control Devices
33.1-24-02-174 Test Methods and Procedures
33.1-24-02-175 Recordkeeping Requirements
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
33.1-24-02-181 Definitions
33.1-24-02-182 Standards - Pumps in Light Liquid Service
33.1-24-02-183 Standards - Compressors
33.1-24-02-184 Standards - Pressure Relief Devices in Gas or Vapor Service
33.1-24-02-185 Standards - Sampling Connection Systems
33.1-24-02-186 Standards - Open-Ended Valves or Lines
33.1-24-02-187 Standards - Valves in Gas or Vapor Service or in Light Liquid Service
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
33.1-24-02-189 Standards - Delay of Repair
33.1-24-02-190 Standards - Closed-Vent Systems and Control Devices
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
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
33.1-24-02-193 Test Methods and Procedures
33.1-24-02-194 Recordkeeping Requirements
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 of Air Emission Standards for Tanks and Containers
33.1-24-02-201 Definitions
33.1-24-02-202 Standards - General
33.1-24-02-203 Material Determination Procedures
33.1-24-02-204 Standards - Tanks
33.1-24-02-205 [Reserved]
33.1-24-02-206 Standards - Containers
33.1-24-02-207 Standards - Closed-Vent Systems and Control Devices
33.1-24-02-208 Inspection and Monitoring Requirements
33.1-24-02-209 Recordkeeping Requirements
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]

**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 very 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 January 1, 2019; amended effective July 1, 2020.
**General Authority:** NDCC 23.1-04-03; S.L. 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**

| | Use Constituting | Energy Recovery/Fuel | Reclamation | Speculative |
|---|---|---|---|---|

| | Disposal (Subdivision a of Subsection 3 of Section 33.1-24-02-02)<br>(1) | (Subdivision b of Subsection 3 of Section 33.1-24-02-02)<br>(2) | (Subdivision c of Subsection 3 of Section 33.1-24-02-02[1])<br>(3) | Accumulation (Subdivision d of Subsection 3 of Section 33.1-24-02-02)<br>(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 | (*) | (*) | (*) | (*) |
| [1]Except as provided by Subdivision q, x, y, or z of Subsection 1 of Section 33.1-24-02-04.<br>**NOTE:** The terms "spent materials", "sludges", "byproducts", "scrap metal", and "processed scrap metal" are defined in Section 33.1-24-02-01. | | | | |

**History:** Effective January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 Act 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.

| Constituent | Maximum for Any Single Composite Sample - Toxicity Characteristic Leaching Procedure (mg/l) |
|---|---|
| Generic exclusion levels for K061 and K062 nonwastewater high temperature metals recovery residues | |

| | |
|---|---|
| Antimony | 0.10 |
| Arsenic | 0.50 |
| Barium | 7.6 |
| Beryllium | 0.010 |
| Cadmium | 0.050 |
| Chromium (total) | 0.33 |
| Lead | 0.15 |
| Mercury | 0.009 |
| Nickel | 1.0 |
| Selenium | 0.16 |
| Silver | 0.30 |
| Thallium | 0.020 |
| Zinc | 70 |
| Generic exclusion levels for F006 nonwastewater high temperature metals recovery residues | |
| Antimony | 0.10 |
| Arsenic | 0.50 |
| Barium | 7.6 |
| Beryllium | 0.010 |
| Cadmium | 0.050 |
| Chromium (total) | 0.33 |
| Cyanide (total) (mg/kg) | 1.8 |
| Lead | 0.15 |
| Mercury | 0.009 |
| Nickel | 1.0 |
| Selenium | 0.16 |
| Silver | 0.30 |
| Thallium | 0.020 |
| Zinc | 70 |

[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 33-24-05-800 through 33-24-05-929:

   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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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. Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment, except as prohibited by section 33.1-24-05-315 and chapter 33.1-16-01.1. “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 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:

| Constituent | Maximum Allowable Total Concentration in Fertilizer, Per Unit (1 Percent) of Zinc (ppm) |
|---|---|
| Arsenic | 0.3 |
| Cadmium | 1.4 |
| Chromium | 0.6 |
| Lead | 2.8 |
| Mercury | 0.3 |

(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; and

(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 another person 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) Prior to arranging for transport of hazardous secondary materials to a reclamation facility where the management of hazardous secondary materials is not addressed under a hazardous waste permit or interim status standards, the hazardous secondary material generator shall make reasonable efforts to ensure each reclaimer intends to properly and legitimately reclaim the hazardous secondary material and not discard it; and that each reclaimer will manage the hazardous secondary material in a manner that is protective of human health and the environment. If the hazardous secondary material will be passing through an intermediate facility where the management of the hazardous secondary materials is not addressed under a hazardous waste permit or interim status standards, the hazardous secondary material generator shall 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, and the hazardous secondary material generator shall perform reasonable efforts to ensure that the intermediate facility will manage the hazardous secondary material in a manner that is protective of human health and the environment. Reasonable efforts must be repeated at a minimum of every three years for the hazardous secondary material generator to claim the exclusion and to send the hazardous secondary materials to each reclaimer and any intermediate facility. In making these reasonable efforts, the generator may use any credible evidence available, including information gathered by the hazardous secondary material generator, provided by the reclaimer or intermediate facility, or provided by a third party, or provided by both. The hazardous secondary material generator shall answer affirmatively all of the following questions for each reclamation facility and any intermediate facility:

[1] Does the available information indicate the reclamation process is legitimate pursuant to section 33.1-24-01-19?

[2] Does the publicly available information indicate the reclamation facility, and any intermediate facility, used by the hazardous secondary material generator notified the appropriate authorities of hazardous secondary materials reclamation activities pursuant to section 33.1-24-01-18, and have they notified the appropriate authorities the financial assurance condition has been satisfied?

[3] Does the publicly available information indicate the reclamation facility, or any intermediate facility, used by the secondary material generator has not had any formal enforcement actions taken against the facility in the previous three years for violations of North Dakota hazardous waste rules?

[4] Does the available information indicate the reclamation facility, and any intermediate facility, used by the hazardous secondary material generator have the equipment and trained personnel to safely recycle the hazardous secondary material?

[5] If residuals are generated from the reclamation of the excluded hazardous secondary materials, does the reclamation facility have the permits required to manage the residuals? If not, does the reclamation facility have a contract with an appropriately permitted facility to dispose of the

residuals? If not, does the hazardous secondary material generator have credible evidence the residuals will be managed in a manner that is protective of human health and the environment?

(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; and

[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 parts 60, 61, or 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 33-24-02-01.

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 $TiO_2$ 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 one hundred eighty 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 one hundred eighty-day accumulation time limit in paragraph 2 of subdivision p of subsection 2 of section 33.1-24-02-04 is being met; and

(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 and d, 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.

d. In order to qualify for the exemption in paragraphs 1 and 2 of subdivision a, the mass of a sample that will be exported to a foreign laboratory or that will be imported to a United States laboratory from a foreign source must additionally not exceed twenty-five kilograms.

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 subsection 2 of section 33.1-24-03-03 and section 33.1-24-03-29 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.

d. In order to qualify for the exemption in paragraph 1 of subdivision a, the mass of a sample that will be exported to a foreign laboratory or that will be imported to a United States laboratory from a foreign source must additionally not exceed twenty-five kilograms.

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.

10. **Airbag wastes.** Airbag waste at the airbag waste handler or during transport to an airbag waste collection facility or designated facility is not subject to regulations under chapters 3 through 7 of article 33.1-24, and is not subject to the notification requirements of section 3010 of the Resource Conversation and Recovery Act provided that:

a. The airbag waste is accumulated in a quantity of no more than two hundred fifty airbag modules or airbag inflators, for no longer than one hundred eighty days;

b. The airbag waste is packaged in a container designed to address the risk posed by the airbag waste and labeled "Airbag Waste - Do Not Reuse‿;

c. The airbag waste is sent directly to either:

(1) An airbag waste collection facility in the United States under the control of a vehicle manufacturer or their authorized representative, or under the control of an authorized party administering a remedy program in response to a recall under the national highway traffic safety administration; or

(2) A designated facility as defined in subsection 35 of section 33.1-24-01-04;

d. The transport of the airbag waste complies with all applicable United States department of transportation regulations in 49 CFR part 171 through 180 during transit;

e. The airbag waste handler maintains at the handler facility for no less than three years records of all offsite shipments of airbag waste and all confirmations of receipt from the receiving facility. For each shipment, these records must, at a minimum, contain the name of the transporter and date of the shipment; name and address of receiving facility; and the type and quantity of airbag waste (i.e., airbag modules or airbag inflators) in the shipment. Confirmations of receipt must include the name and address of the receiving facility; the type and quantity of the airbag waste (i.e., airbag modules and airbag inflators) received, and the date it was received. Shipping records and confirmations of receipt must be made available for inspection and may be satisfied by routine business

records (e.g., electronic or paper financial records, bills of lading, copies of department of transportation shipping papers, or electronic confirmations of receipt).

f. Once the airbag waste arrives at an airbag waste collection facility or designated facility, it becomes subject to all applicable hazardous waste regulations, and the facility receiving airbag waste is considered the hazardous waste generator for the purposes of the hazardous waste regulations and must comply with the requirements of chapter 33.1-24-03.

g. Reuse in vehicles of defective airbag modules or defective airbag inflators subject to a recall under the national highway traffic safety administration is considered sham recycling and is prohibited under subsection 7 of section 33.1-24-02-02.

**History:** Effective January 1, 2019; amended effective July 1, 2020; July 1, 2021.
**General Authority:** NDCC 23.1-04-03
**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 very small quantity generators.**

Repealed effective July 1, 2021.

**33.1-24-02-06. Requirements for recyclable materials and universal waste.**

1. The 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 are 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. See sections 33.1-24-05-201 through 33.1-24-05-209.

      (2) Hazardous wastes burned or processed in a boiler or industrial furnace that are not regulated by sections 33.1-24-05-144 through 33.1-24-05-151 are regulated by sections 33.1-24-05-525 through 33.1-24-05-549 as specified in subsection 1 of section 33.1-24-05-525.

      (3) Recyclable materials from which precious metals are reclaimed. See sections 33.1-24-05-230 through 33.1-4-05-234.

      (4) Spent lead-acid batteries that are being reclaimed. See sections 33.1-24-05-235 through 33.1-24-05-249.

   c. The following recyclable materials are not subject to 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 exports and imports of such recyclable materials must comply with the requirements of sections 33.1-24-03-50 through 33.1-24-03-55.

(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, if such recovered oil is already excluded by 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, if 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, if such hazardous wastes are reintroduced into a refining process after a point in which contaminates 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 or imported for the purpose of recovery is subject to the requirements of sections 33.1-24-03-50 through 33.1-24-03-59.

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;

(3) Subsection 4 of section 33.1-24-02-06; and

(4) The owner or operator shall complete and submit environmental protection agency form 8700-13 A/B to the regional administrator by March first of the following even-numbered year and must cover activities during the previous year.

4. Owners or operators of hazardous waste facilities permitted 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 following wastes 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 are not fully regulated as hazardous waste, and 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;

d. Lamps as described in section 33.1-24-05-705; and

e. Aerosol cans as described in section 33.1-24-05-706.

**History:** Effective January 1, 2019; amended effective July 1, 2020; October 1, 2026.
**General Authority:** NDCC 23.1-04-03
**Law Implemented:** NDCC 23.1-04-03, 23.1-04-05

**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.

6. Containers of hazardous waste pharmaceuticals are subject to section 33.1-24-05-317 for determining when the containers are considered empty, in lieu of this section, except as provided by subsections 3 and 4 of section 33.1-24-05-317.

**History:** Effective January 1, 2019; amended effective July 1, 2021.
**General Authority:** NDCC 23.1-04-03
**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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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.

**History:** Effective January 1, 2019; amended effective July 1, 2021.
**General Authority:** NDCC 23.1-04-03
**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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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.

**Table 1. Maximum Concentration of Contaminants for the Toxicity Characteristic**

| EPA HW No.[1] | Contaminant | CAS No.[2] | Regulatory Level (mg/l) |
|---|---|---|---|
| D004 | Arsenic | 7440-38-2 | 5.0 |
| D005 | Barium | 7440-39-3 | 100.0 |
| D018 | Benzene | 71-43-2 | 0.5 |
| D006 | Cadmium | 7440-43-9 | 1.0 |
| D019 | Carbon tetrachloride | 56-23-5 | 0.5 |
| D020 | Chlordane | 57-74-9 | 0.03 |
| D021 | Chlorobenzene | 108-90-7 | 100.0 |
| D022 | Chloroform | 67-66-3 | 6.0 |

| | | | |
|---|---|---|---|
| D007 | Chromium | 7440-47-3 | 5.0 |
| D023 | o-Cresol | 95-48-7 | [4]200.0 |
| D024 | m-Cresol | 108-39-4 | [4]200.0 |
| D025 | p-Cresol | 106-44-5 | [4]200.0 |
| D026 | Cresol | ..... | [4]200.0 |
| D016 | 2,4-D | 94-75-7 | 10.0 |
| D027 | 1,4-Dichlorobenzene | 106-46-7 | 7.5 |
| D028 | 1,2-Dichloroethane | 107-06-2 | 0.5 |
| D029 | 1,1-Dichloroethylene | 75-35-4 | 0.7 |
| D030 | 2,4-Dinitrotoluene | 121-14-2 | [3]0.13 |
| D012 | Endrin | 72-20-8 | 0.02 |
| D031 | Heptachlor (and its epoxide) | 76-44-8 | 0.008 |
| D032 | Hexachlorobenzene | 118-74-1 | [3]0.13 |
| D033 | Hexachlorobutadiene | 87-68-3 | 0.5 |
| D034 | Hexachloroethane | 67-72-1 | 3.0 |
| D008 | Lead | 7439-92-1 | 5.0 |
| D013 | Lindane | 58-89-9 | 0.4 |
| D009 | Mercury | 7439-97-6 | 0.2 |
| D014 | Methoxychlor | 72-43-5 | 10.0 |
| D035 | Methyl ethyl ketone | 78-93-3 | 200.0 |
| D036 | Nitrobenzene | 98-95-3 | 2.0 |
| D037 | Pentachlorophenol | 87-86-5 | 100.0 |
| D038 | Pyridine | 110-86-1 | [3]5.0 |
| D010 | Selenium | 7782-49-2 | 1.0 |
| D011 | Silver | 7440-22-4 | 5.0 |
| D039 | Tetrachloroethylene | 127-18-4 | 0.7 |
| D015 | Toxaphene | 8001-35-2 | 0.5 |
| D040 | Trichloroethylene | 79-01-6 | 0.5 |
| D041 | 2,4,5-Trichlorophenol | 95-95-4 | 400.0 |
| D042 | 2,4,6-Trichlorophenol | 88-06-2 | 2.0 |
| D017 | 2,4,5-TP (Silvex) | 93-72-1 | 1.0 |
| D043 | Vinyl chloride | 75-01-4 | 0.2 |

[1]Hazardous waste number.

[2]Chemical abstracts service number.

[3]Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

[4]If 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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:

| Waste Type | Waste Hazard Code |
|---|---|
| Ignitable waste | (I) |
| Corrosive waste | (C) |
| Reactive waste | (R) |
| Toxicity characteristic waste | (E) |
| Acute hazardous waste | (H) |
| Toxic waste | (T) |

   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 33.1-24-03-26: hazardous waste numbers F020, F021, F022, F023, F026, and F027.

**History:** Effective January 1, 2019; amended effective July 1, 2021.
**General Authority:** NDCC 23.1-04-03
**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.

| Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| Generic: | | |
| F001 | 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 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. | (T) |
| F002 | The following spent halogenated solvents: | (T) |

| | | |
|---|---|---|
| | 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. | |
| 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) |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | (R, T) |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. | (R, T) |
| F010 | Quenching bath residue from oil baths from metal heat | (R, T) |

| | | |
|---|---|---|
| | treating operations where cyanides are used in the process. | |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. | (R, T) |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. | (T) |
| F019 | 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. | (T) |
| F020 | 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 tetrachlorophenal, 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.) | (H) |
| F021 | 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. | (H) |
| F022 | 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. | (H) |
| F023 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) 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 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.) | (H) |
| F024 | Process wastes, including distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of | (T) |

| | | |
|---|---|---|
| | 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.) | |
| 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 | (T) |

| | | |
|---|---|---|
| | 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. | |
| 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 storm water units receiving dry weather flow, sludge generated in storm water 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 storm water 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 treatment units) and F037, K048, and K051 wastes are not included in this listing. | (T) |
| 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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.

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| **Wood Preservation:** | | |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. | (T) |
| **Inorganic Pigments:** | | |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. | (T) |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | (T) |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | (T) |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | (T) |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated). | (T) |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | (T) |
| K008 | Oven residue from the production of chrome oxide green pigments. | (T) |
| **Organic Chemicals:** | | |
| K009 | Distillation bottoms from the production of acetaldehyde from ethylene. | (T) |
| K010 | Distillation side cuts from the production of acetaldehyde from ethylene. | (T) |
| K011 | Bottom stream from the wastewater stripper in the production of acrylonitrile. | (R, T) |
| K013 | Bottom stream from the acetonitrile column in the production of acrylonitrile. | (R, T) |
| K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | (T) |
| K015 | Still bottoms from the distillation of benzyl chloride. | (T) |
| K016 | Heavy ends or distillation residues from the production of carbon tetrachloride. | (T) |
| K017 | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. | (T) |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | (T) |
| K019 | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. | (T) |

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. | (T) |
| K021 | Aqueous spent antimony catalyst waste from fluoromethanes production. | (T) |
| K022 | Distillation bottom tars from the production of phenol/acetone from cumene. | (T) |
| K023 | Distillation light ends from the production of phthalic anhydride from naphthalene. | (T) |
| K024 | Distillation bottoms from the production of phthalic anhydride from naphthalene. | (T) |
| K025 | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. | (T) |
| K026 | Stripping still tails from the production of methyl ethyl pyridines. | (T) |
| K027 | Centrifuge and distillation residues from toluene diisocyanate production. | (R, T) |
| K028 | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. | (T) |
| K029 | Waste from the product steam stripper in the production of 1,1,1-trichloroethane. | (T) |
| K030 | Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. | (T) |
| K083 | Distillation bottoms from aniline production. | (T) |
| K085 | Distillation or fractionation column bottoms from the production of chlorobenzenes. | (T) |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | (T) |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | (T) |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | (T) |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | (T) |
| K103 | Process residues from aniline extraction from the production of aniline. | (T) |
| K104 | Combined wastewater streams generated from nitrobenzene/aniline production. | (T) |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | (T) |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (C,T) |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (I,T) |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (T) |
| K110 | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | (T) |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene. | (C,T) |
| K112 | Reaction byproduct water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | (T) |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene | (T) |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | (T) |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | (T) |

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| K118 | Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | (T) |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | (T) |
| K149 | 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). | (T) |
| K150 | 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. | (T) |
| K151 | 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. | (T) |
| K156 | 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.) | (T) |
| K157 | 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.) | (T) |
| K158 | 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.) | (T) |
| K159 | Organics from the treatment of thiocarbamate wastes. | (T) |
| K161 | Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.) | (R, T) |
| K174 | 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. | (T) |
| K175 | Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. | (T) |

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| K181 | 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. | (T) |
| **Inorganic Chemicals:** | | |
| K071 | Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used. | (T) |
| K073 | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. | (T) |
| K106 | Wastewater treatment sludge from the mercury cell process in chlorine production. | (T) |
| K176 | Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (for example, antimony metal or crude antimony oxide). | (E) |
| K177 | 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). | (T) |
| K178 | Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. | (T) |
| **Pesticides:** | | |
| K031 | Byproduct salts generated in the production of MSMA and cacodylic acid. | (T) |
| K032 | Wastewater treatment sludge from the production of chlordane. | (T) |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | (T) |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | (T) |
| K035 | Wastewater treatment sludges generated in the production of creosote. | (T) |
| K036 | Still bottoms from toluene reclamation distillation in the production of disulfoton. | (T) |
| K037 | Wastewater treatment sludges from the production of disulfoton. | (T) |
| K038 | Wastewater from the washing and stripping of phorate production. | (T) |
| K039 | Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. | (T) |
| K040 | Wastewater treatment sludge from the production of phorate. | (T) |
| K041 | Wastewater treatment sludge from the production of toxaphene. | (T) |
| K042 | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. | (T) |
| K043 | 2,6-Dichlorophenol waste from the production 2,4-D. | (T) |

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | (T) |
| K098 | Untreated process wastewater from the production of toxaphene. | (T) |
| K099 | Untreated wastewater from the production of 2,4-D. | (T) |
| K123 | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt. | (T) |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | (C, T) |
| K125 | Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | (T) |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | (T) |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | (C, T) |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | (T) |
| **Explosives:** | | |
| K044 | Wastewater treatment sludges from the manufacturing and processing of explosives. | (R) |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | (R) |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | (T) |
| K047 | Pink/red water from TNT operations. | (R) |
| **Petroleum Refining:** | | |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | (T) |
| K049 | Slop oil emulsion solids from the petroleum refining industry. | (T) |
| K050 | Heat exchanger bundle cleaning sludge from the petroleum refining industry. | (T) |
| K051 | API separator sludge from the petroleum refining industry. | (T) |
| K052 | Tank bottoms (leaded) from the petroleum refining industry. | (T) |
| K169 | Crude oil storage tank sediment from petroleum refining operations. | (T) |
| K170 | Clarified slurry oil tank sediment or in-line filter/separation solids, or both, from petroleum refining operations. | (T) |
| 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). | (I, T) |
| K172 | 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). | (I, T) |
| **Iron and Steel:** | | |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. | (T) |
| K062 | Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC codes 331 and 332). | (C, T) |
| **Primary Aluminum:** | | |
| K088 | Spent potliners from primary aluminum reduction. | (T) |
| **Secondary Lead:** | | |

| Industry and Hazardous Waste No. | Hazardous Waste | Hazard Code |
|---|---|---|
| K069 | 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.) | (T) |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. | (T) |
| **Veterinary Pharmaceuticals:** | | |
| K084 | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| K101 | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | (T) |
| **Ink Formulation:** | | |
| K086 | 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. | (T) |
| **Coking:** | | |
| K060 | Ammonia still lime sludge from coking operations. | (T) |
| K087 | Decanter tank tar sludge from coking operations. | (T) |
| K141 | Process residues from the recovery of coal tar, including 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). | (T) |
| K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke byproducts produced from coal. | (T) |
| K143 | Process residues from the recovery of light oil, including those generated in stills, decanters, and wash oil recovery units from the recovery of coke byproducts produced from coal. | (T) |
| K144 | Wastewater sump residues from light oil refining, including intercepting or contamination sump sludges from the recovery of coke byproducts produced from coal. | (T) |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke byproducts produced from coal. | (T) |
| K147 | Tar storage tank residues from coal tar refining. | (T) |
| K148 | Residues from coal tar distillation, including still bottoms. | (T) |

2. Listing specific definitions:

   a. For the purposes of the K181 listing, dyes or pigments, 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 pigments, 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:

| Constituent | Chemical Abstracts No. | Mass Levels (Kilograms per Year) |
|---|---|---|
| Aniline | 62-53-3 | 9,300 |
| o-Anisidine | 90-04-0 | 110 |
| 4-Chloroaniline | 106-47-8 | 4,800 |
| p-Cresidine | 120-71-8 | 660 |
| 2,4-Dimethyaniline | 95-68-1 | 100 |
| 1,2-Phenylenediamine | 95-54-5 | 710 |
| 1,3-Phenylenediamine | 108-45-2 | 1,200 |

4. Procedures for demonstrating that dyes or pigments, 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 pigments, 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 pigments, 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 first through December thirty-first 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 onsite for the three most recent calendar years in which the hazardous waste determinations are made:

(a) The quantity of dyes or pigments, 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 pigments, 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 generator's 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 first and December thirty-first of any year is below the K181 listing levels.

(10) Keep the following records onsite 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 pigments, 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 or manufacturing chemical intermediate having the generic name listed in subsection 5 or 6, unless the container is empty as defined in subsections 3 through 5 of section 33.1-24-02-07, or section 33.1-24-05-317.

   NOTE: Unless the residue is being beneficially used or reused, 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, or off-specification commercial chemical products or manufacturing chemical intermediates referred to in subsections 1 through 4, are identified as acute hazardous wastes (H).
These wastes and their corresponding hazardous waste numbers are:

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| 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 $H_3AsO_4$ |
| P012 | 1327-53-3 | Arsenic oxide $As_2O_3$ |
| P011 | 1303-28-2 | Arsenic oxide $As_2O_5$ |
| 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 |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P188 | 57-64-7 | 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) |
| P001 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3% |
| P028 | 100-44-7 | Benzyl chloride |
| P015 | 7440-41-7 | Beryllium powder |
| P017 | 598-31-2 | Bromoacetone |
| P018 | 357-57-3 | Brucine |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime |
| P021 | 592-01-8 | Calcium cyanide |
| P021 | 592-01-8 | Calcium cyanide $Ca(CN)_2$ |
| P189 | 55285-14-8 | Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester |
| P191 | 644-64-4 | Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester |
| P192 | 119-38-0 | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester |
| P190 | 1129-41-5 | Carbamic acid, methyl-, 3-methylphenyl ester |
| P127 | 1563-66-2 | Carbofuran |
| P022 | 75-15-0 | Carbon disulfide |
| P095 | 75-44-5 | Carbonic dichloride |
| P189 | 55285-14-8 | Carbosulfan |
| P023 | 107-20-0 | Chloroacetaldehyde |
| P024 | 106-47-8 | p-Chloroaniline |
| P026 | 5344-82-1 | 1-(o-Chlorophenyl)thiourea |
| P027 | 542-76-7 | 3-Chloropropionitrile |
| P029 | 544-92-3 | Copper cyanide |
| P029 | 544-92-3 | Copper cyanide Cu(CN) |
| P202 | 64-00-6 | m-Cumenyl methylcarbamate |
| P030 | ..... | Cyanides (soluble cyanide salts), not otherwise specified |
| P031 | 460-19-5 | Cyanogen |
| P033 | 506-77-4 | Cyanogen chloride |
| P033 | 506-77-4 | Cyanogen chloride (CN)Cl |
| P034 | 131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol |
| P016 | 542-88-1 | Dichloromethyl ether |
| P036 | 696-28-6 | Dichlorophenylarsine |
| P037 | 60-57-1 | Dieldrin |
| P038 | 692-42-2 | Diethylarsine |
| P041 | 311-45-5 | Diethyl-p-nitrophenyl phosphate |
| P040 | 297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate |
| P043 | 55-91-4 | Diisopropylfluorophosphate (DFP) |
| P004 | 309-00-2 | 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)- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P060 | 465-73-6 | 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)- |
| P037 | 60-57-1 | 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)- |
| P051 | [1]72-20-8 | 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 |
| P044 | 60-51-5 | Dimethoate |
| P046 | 122-09-8 | alpha, alpha-Dimethylphenthylamine |
| P191 | 644-64-4 | Dimetilan |
| P047 | [1]534-52-1 | 4,6-Dinitro-o-cresol & salts |
| P048 | 51-28-5 | 2,4-Dinitrophenol |
| P020 | 88-85-7 | Dinoseb |
| P085 | 152-16-9 | Diphosphoramide, octamethyl- |
| P111 | 107-49-3 | Diphosphoric acid, tetraethyl ester |
| P039 | 298-04-4 | Disulfoton |
| P049 | 541-53-7 | Dithiobiuret |
| P185 | 26419-73-8 | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime |
| P050 | 115-29-7 | Endosulfan |
| P088 | 145-73-3 | Endothall |
| P051 | 72-20-8 | Endrin |
| P051 | 72-20-8 | Endrin, & metabolites |
| P042 | 51-43-4 | Epinephrine |
| P031 | 460-19-5 | Ethanedinitrile |
| P066 | 16752-77-5 | Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester |
| P194 | 23135-22-0 | Ethanimidothioic acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester |
| P101 | 107-12-0 | Ethyl cyanide |
| P054 | 151-56-4 | Ethyleneimine |
| P097 | 52-85-7 | Famphur |
| P056 | 7782-41-4 | Fluorine |
| P057 | 640-19-7 | Fluoroacetamide |
| P058 | 62-74-8 | Fluoroacetic acid, sodium salt |
| P198 | 23422-53-9 | Formetanate hydrochloride |
| P197 | 17702-57-7 | Formparanate |
| P065 | 628-86-4 | Fulminic acid, mercury(2+) salt (R,T) |
| P059 | 76-44-8 | Heptachlor |
| P062 | 757-58-4 | Hexaethyl tetraphosphate |
| P116 | 79-19-6 | Hydrazinecarbothioamide |
| P068 | 60-34-4 | Hydrazine, methyl- |
| P063 | 74-90-8 | Hydrocyanic acid |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P063 | 74-90-8 | Hydrogen cyanide |
| P096 | 7803-51-2 | Hydrogen phosphide |
| P060 | 465-73-6 | Isodrin |
| P192 | 119-38-0 | Isolan |
| P202 | 64-00-6 | 3-Isopropylphenyl N-methylcarbamate |
| P007 | 2763-96-4 | 3(2H)-Isoxazolone, 5-(aminomethyl)- |
| P196 | 15339-36-3 | Manganese, bis(dimethylcarbamodithioato-S,S')-, |
| P196 | 15339-36-3 | Manganese dimethyldithiocarbamate |
| P092 | 62-38-4 | Mercury, (acetato-O)phenyl- |
| P065 | 628-86-4 | Mercury fulminate (R,T) |
| P082 | 62-75-9 | Methanamine, N-methyl-N-nitroso- |
| P064 | 624-83-9 | Methane, isocyanato- |
| P016 | 542-88-1 | Methane, oxybis[chloro- |
| P112 | 509-14-8 | Methane, tetranitro- (R) |
| P118 | 75-70-7 | Methanethiol, trichloro- |
| P198 | 23422-53-9 | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride |
| P197 | 17702-57-7 | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]- |
| P050 | 115-29-7 | 6,9-Methano-2,4,3-benxodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide |
| P059 | 76-44-8 | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- |
| P199 | 2032-65-7 | Methiocarb |
| P066 | 16752-77-5 | Methomyl |
| P068 | 60-34-4 | Methyl hydrazine |
| P064 | 624-83-9 | Methyl isocyanate |
| P069 | 75-86-5 | 2-Methyllactonitrile |
| P071 | 298-00-0 | Methyl parathion |
| P190 | 1129-41-5 | Metolcarb |
| P128 | 315-18-4 | Mexacarbate |
| P072 | 86-88-4 | alpha-Naphthylthiourea |
| P073 | 13463-39-3 | Nickel carbonyl |
| P073 | 13463-39-3 | Nickel carbonyl $Ni(CO)_4$, (T-4)- |
| P074 | 557-19-7 | Nickel cyanide |
| P074 | 557-19-7 | Nickel cyanide $Ni(CN)_2$ |
| P075 | [1]54-11-5 | Nicotine and salts (This listing does not include patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies.) |
| P076 | 10102-43-9 | Nitric oxide |
| P077 | 100-01-6 | p-Nitroaniline |
| P078 | 10102-44-0 | Nitrogen dioxide |
| P076 | 10102-43-9 | Nitrogen oxide NO |
| P078 | 10102-44-0 | Nitrogen oxide $NO_2$ |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P081 | 55-63-0 | Nitroglycerine (R) |
| P082 | 62-75-9 | N-Nitrosodimethylamine |
| P084 | 4549-40-0 | N-Nitrosomethylvinylamine |
| P085 | 152-16-9 | Octamethylpyrophosphoramide |
| P087 | 20816-12-0 | Osmium oxide $OsO_4$, (T-4)- |
| P087 | 20816-12-0 | Osmium tetroxide |
| P088 | 145-73-3 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |
| P194 | 23135-22-0 | Oxamyl |
| P089 | 56-38-2 | Parathion |
| P034 | 131-89-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P128 | 315-18-4 | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) |
| P199 | 2032-65-7 | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate |
| P048 | 51-28-5 | Phenol, 2,4-dinitro- |
| P047 | [1]534-52-1 | Phenol, 2-methyl-4,6-dintro-, & salts |
| P202 | 64-00-6 | Phenol, 3-(1-methylethyl)-, methylcarbamate |
| P201 | 2631-37-0 | Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate |
| P020 | 88-85-7 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P009 | 131-74-8 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P092 | 62-38-4 | Phenylmercury acetate |
| P093 | 103-85-5 | Phenylthiourea |
| P094 | 298-02-2 | Phorate |
| P095 | 75-44-5 | Phosgene |
| P096 | 7803-51-2 | Phosphine |
| P041 | 311-45-5 | Phosphoric acid, diethyl 4-nitrophenyl ester |
| P039 | 298-04-4 | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester |
| P094 | 298-02-2 | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester |
| P044 | 60-51-5 | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester |
| P043 | 55-91-4 | Phosphorofluoridic acid, bis(1-methylethyl) ester |
| P089 | 56-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P040 | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P097 | 52-85-7 | Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester |
| P071 | 298-00-0 | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester |
| P204 | 57-47-6 | Physostigmine |
| P188 | 57-64-7 | Physostigmine salicylate |
| P110 | 78-00-2 | Plumbane, tetraethyl- |
| P098 | 151-50-8 | Potassium cyanide |
| P098 | 151-50-8 | Potassium cyanide K(CN) |
| P099 | 506-61-6 | Potassium silver cyanide |
| P201 | 2631-37-0 | Promecarb |
| P070 | 116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P203 | 1646-88-4 | Propanal, 2-methyl-2-(methyl sulfonyl)-, O-[(methylamino)carbonyl] oxime |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P101 | 107-12-0 | Propanenitrile |
| P027 | 542-76-7 | Propanenitrile, 3-chloro- |
| P069 | 75-86-5 | Propanenitrile, 2-hydroxy-2 methyl- |
| P081 | 55-63-0 | 1,2,3-Propanetriol, trinitrate (R) |
| P017 | 598-31-2 | 2-Propanone, 1-bromo- |
| P102 | 107-19-7 | Propargyl alcohol |
| P003 | 107-02-8 | 2-Propenal |
| P005 | 107-18-6 | 2-Propen-1-ol |
| P067 | 75-55-8 | 1,2-Propylenimine |
| P102 | 107-19-7 | 2-Propyn-1-ol |
| P008 | 504-24-5 | Pyridianamine |
| P075 | [1]54-11-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts (This listing does not include patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies.) |
| P204 | 57-47-6 | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- |
| P114 | 12039-52-0 | Selenious acid, dithallium(1+) salt |
| P103 | 630-10-4 | Selenourea |
| P104 | 506-64-9 | Silver cyanide |
| P104 | 506-64-9 | Silver cyanide Ag(CN) |
| P105 | 26628-22-8 | Sodium azide |
| P106 | 143-33-9 | Sodium cyanide |
| P106 | 143-33-9 | Sodium cyanide Na(CN) |
| P108 | [1]57-24-9 | Strychnidin-10-one, & salts |
| P018 | 357-57-3 | Strychnidin-10-one, 2,3-dimethoxy- |
| P108 | [1]57-24-9 | Strychnine & salts |
| P115 | 7446-18-6 | Sulfuric acid, dithallium(1+) salt |
| P109 | 3689-24-5 | Tetraethyldithiopyrophosphate |
| P110 | 78-00-2 | Tetraethyl lead |
| P111 | 107-49-3 | Tetraethyl pyrophosphate |
| P112 | 509-14-8 | Tetranitromethane (R) |
| P062 | 757-58-4 | Tetraphosphoric acid, hexaethyl ester |
| P113 | 1314-32-5 | Thallic oxide |
| P113 | 1314-32-5 | Thallium oxide $Tl_2O_3$ |
| P114 | 12039-52-0 | Thallium(I) selenite |
| P115 | 7446-18-6 | Thallium(I) sulfate |
| P109 | 3689-24-5 | Thiodiphosphoric acid, tetraethyl ester |
| P045 | 39196-18-4 | Thiofanox |
| P049 | 541-53-7 | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ |
| P014 | 108-98-5 | Thiophenol |
| P116 | 79-19-6 | Thiosemicarbazide |
| P026 | 5344-82-1 | Thiourea, (2-chlorophenyl)- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P072 | 86-88-4 | Thiourea, 1-naphthalenyl- |
| P093 | 103-85-5 | Thiourea, phenyl- |
| P185 | 26419-73-8 | Tirpate |
| P123 | 80201-35-2 | Toxaphene |
| P118 | 75-70-7 | Trichloromethanethiol |
| P119 | 7803-55-6 | Vanadic acid, ammonium salt |
| P120 | 1314-62-1 | Vanadium oxide $V_2O_5$ |
| P120 | 1314-62-1 | Vanadium pentoxide |
| P084 | 4549-40-0 | Vinylamine, N-methyl-N-nitroso- |
| P001 | [1]81-81-2 | Warfarin, & salts, when present at concentrations greater than 0.3% |
| P205 | 137-30-4 | Zinc, bis(dimethylcarbamodithioato-S,S')-, |
| P121 | 557-21-1 | Zinc cyanide |
| P121 | 557-21-1 | Zinc cyanide $Zn(CN)_2$ |
| P122 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% (R,T) |
| P205 | 137-30-4 | Ziram. |
| P001 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3% |
| P001 | [1]81-81-2 | Warfarin, & salts, when present at concentrations greater than 0.3% |
| P002 | 591-08-2 | Acetamide, N-(aminothioxomethyl)- |
| P002 | 591-08-2 | 1-Acetyl-2-thiourea |
| P003 | 107-02-8 | Acrolein |
| P003 | 107-02-8 | 2-Propenal |
| P004 | 309-00-2 | Aldrin |
| P004 | 309-00-2 | 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)- |
| P005 | 107-18-6 | Allyl alcohol |
| P005 | 107-18-6 | 2-Propen-1-ol |
| P006 | 20859-73-8 | Aluminum phosphide (R,T) |
| P007 | 2763-96-4 | 5-(Aminomethyl)-3-isoxazolol |
| P007 | 2763-96-4 | 3(2H)-Isoxazolone, 5-(aminomethyl)- |
| P008 | 504-24-5 | 4-Aminopyridine |
| P008 | 504-24-5 | 4-Pyridinamine |
| P009 | 131-74-8 | Ammonium picrate (R) |
| P009 | 131-74-8 | Phenol, 2,4,6-trinitro-, ammonium salt (R) |
| P010 | 7778-39-4 | Arsenic acid $H_3AsO_4$ |
| P011 | 1303-28-2 | Arsenic oxide $As_2O_5$ |
| P011 | 1303-28-2 | Arsenic pentoxide |
| P012 | 1327-53-3 | Arsenic oxide $As_2O_3$ |
| P012 | 1327-53-3 | Arsenic trioxide |
| P013 | 542-62-1 | Barium cyanide |
| P014 | 108-98-5 | Benzenethiol |
| P014 | 108-98-5 | Thiophenol |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P015 | 7440-41-7 | Beryllium powder |
| P016 | 542-88-1 | Dichloromethyl ether |
| P016 | 542-88-1 | Methane, oxybis[chloro- |
| P017 | 598-31-2 | Bromoacetone |
| P017 | 598-31-2 | 2-Propanone, 1-bromo- |
| P018 | 357-57-3 | Brucine |
| P018 | 357-57-3 | Strychnidin-10-one, 2,3-dimethoxy- |
| P020 | 88-85-7 | Dinoseb |
| P020 | 88-85-7 | Phenol, 2-(1-methylpropyl)-4,6-dinitro- |
| P021 | 592-01-8 | Calcium cyanide |
| P021 | 592-01-8 | Calcium cyanide $Ca(CN)_2$ |
| P022 | 75-15-0 | Carbon disulfide |
| P023 | 107-20-0 | Acetaldehyde, chloro- |
| P023 | 107-20-0 | Chloroacetaldehyde |
| P024 | 106-47-8 | Benzenamine, 4-chloro- |
| P024 | 106-47-8 | p-Chloroaniline |
| P026 | 5344-82-1 | 1-(o-Chlorophenyl)thiourea |
| P026 | 5344-82-1 | Thiourea, (2-chlorophenyl) |
| P027 | 542-76-7 | 3-Chloropropionitrile |
| P027 | 542-76-7 | Propanenitrile, 3-chloro- |
| P028 | 100-44-7 | Benzene, (chloromethyl)- |
| P028 | 100-44-7 | Benzyl chloride |
| P029 | 544-92-3 | Copper cyanide |
| P029 | 544-92-3 | Copper cyanide Cu(CN) |
| P030 | ..... | Cyanides (soluble cyanide salts), not otherwise specified |
| P031 | 460-19-5 | Cyanogen |
| P031 | 460-19-5 | Ethanedinitrile |
| P033 | 506-77-4 | Cyanogen chloride |
| P033 | 506-77-4 | Cyanogen chloride (CN)Cl |
| P034 | 131-89-5 | 2-Cyclohexyl-4,6-dinitrophenol |
| P034 | 131-89-5 | Phenol, 2-cyclohexyl-4,6-dinitro- |
| P036 | 696-28-6 | Arsonous dichloride, phenyl- |
| P036 | 696-28-6 | Dichlorophenylarsine |
| P037 | 60-57-1 | Dieldrin |
| P037 | 60-57-1 | 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)- |
| P038 | 692-42-2 | Arsine, diethyl- |
| P038 | 692-42-2 | Diethylarsine |
| P039 | 298-04-4 | Disulfoton |
| P039 | 298-04-4 | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester |
| P040 | 297-97-2 | O,O-Diethyl O-pyrazinyl phosphorothioate |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P040 | 297-97-2 | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester |
| P041 | 311-45-5 | Diethyl-p-nitrophenyl phosphate |
| P041 | 311-45-5 | Phosphoric acid, diethyl 4-nitrophenyl ester |
| P042 | 51-43-4 | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)- |
| P042 | 51-43-4 | Epinephrine |
| P043 | 55-91-4 | Diisopropylfluorophosphate (DFP) |
| P043 | 55-91-4 | Phosphorofluoridic acid, bis(1-methylethyl) ester |
| P044 | 60-51-5 | Dimethoate |
| P044 | 60-51-5 | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester |
| P045 | 39196-18-4 | 2-Butanone, 3,3-dimethyl-1- (methylthio)-, O-[(methylamino)carbonyl] oxime |
| P045 | 39196-18-4 | Thiofanox |
| P046 | 122-09-8 | Benzeneethanamine, alpha, alpha-dimethyl- |
| P046 | 122-09-8 | Alpha, alpha-Dimethylphenethylamine |
| P047 | [1]534-52-1 | 4,6-Dinitro-o-cresol, & salts |
| P047 | [1]534-52-1 | Phenol, 2-methyl-4,6-dinitro-, & salts |
| P048 | 51-28-5 | 2,4-Dinitrophenol |
| P048 | 51-28-5 | Phenol, 2,4-dinitro- |
| P049 | 541-53-7 | Dithiobiuret |
| P049 | 541-53-7 | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ |
| P050 | 115-29-7 | Endosulfan |
| P050 | 115-29-7 | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide |
| P051 | [1]72-20-8 | 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 |
| P051 | 72-20-8 | Endrin |
| P051 | 72-20-8 | Endrin, & metabolites |
| P054 | 151-56-4 | Aziridine |
| P054 | 151-56-4 | Ethyleneimine |
| P056 | 7782-41-4 | Fluorine |
| P057 | 640-19-7 | Acetamide, 2-fluoro- |
| P057 | 640-19-7 | Fluoroacetamide |
| P058 | 62-74-8 | Acetic acid, fluoro-, sodium salt |
| P058 | 62-74-8 | Fluoroacetic acid, sodium salt |
| P059 | 76-44-8 | Heptachlor |
| P059 | 76-44-8 | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- |
| P060 | 465-73-6 | 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)- |
| P060 | 465-73-6 | Isodrin |
| P062 | 757-58-4 | Hexaethyl tetraphosphate |
| P062 | 757-58-4 | Tetraphosphoric acid, hexaethyl ester |
| P063 | 74-90-8 | Hydrocyanic acid |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P063 | 74-90-8 | Hydrogen cyanide |
| P064 | 624-83-9 | Methane, isocyanato- |
| P064 | 624-83-9 | Methyl isocyanate |
| P065 | 628-86-4 | Fulminic acid, mercury(2+) salt (R,T) |
| P065 | 628-86-4 | Mercury fulminate (R,T) |
| P066 | 16752-77-5 | Ethanimidothioic acid, [[N-(methylamino)carbonyl]oxy]-, methyl ester |
| P066 | 16752-77-5 | Methomyl |
| P067 | 75-55-8 | Aziridine, 2-methyl- |
| P067 | 75-55-8 | 1,2-Propylenimine |
| P068 | 60-34-4 | Hydrazine, methyl- |
| P068 | 60-34-4 | Methyl hydrazine |
| P069 | 75-86-5 | 2-Methyllactonitrile |
| P069 | 75-86-5 | Propanenitrile, 2-hydroxy-2-methyl- |
| P070 | 116-06-3 | Aldicarb |
| P070 | 116-06-3 | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime |
| P071 | 298-00-0 | Methyl parathion |
| P071 | 298-00-0 | Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester |
| P072 | 86-88-4 | alpha-Naphthylthiourea |
| P072 | 86-88-4 | Thiourea, 1-naphthalenyl- |
| P073 | 13463-39-3 | Nickel carbonyl |
| P073 | 13463-39-3 | Nickel carbonyl $Ni(CO)_4$, (T-4)- |
| P074 | 557-19-7 | Nickel cyanide |
| P074 | 557-19-7 | Nickel cyanide $Ni(CN)_2$ |
| P075 | [1]54-11-5 | Nicotine, & salts (This listing does not include patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies.) |
| P075 | [1]54-11-5 | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts (This listing does not include patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies.) |
| P076 | 10102-43-9 | Nitric oxide |
| P076 | 10102-43-9 | Nitrogen oxide NO |
| P077 | 100-01-6 | Benzenamine, 4-nitro- |
| P077 | 100-01-6 | p-Nitroaniline |
| P078 | 10102-44-0 | Nitrogen dioxide |
| P078 | 10102-44-0 | Nitrogen oxide $NO_2$ |
| P081 | 55-63-0 | Nitroglycerine (R) |
| P081 | 55-63-0 | 1,2,3-Propanetriol, trinitrate (R) |
| P082 | 62-75-9 | Methanamine, N-methyl-N-nitroso- |
| P082 | 62-75-9 | N-Nitrosodimethylamine |
| P084 | 4549-40-0 | N-Nitrosomethylvinylamine |
| P084 | 4549-40-0 | Vinylamine, N-methyl-N-nitroso- |
| P085 | 152-16-9 | Diphosphoramide, octamethyl- |
| P085 | 152-16-9 | Octamethylpyrophosphoramide |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P087 | 20816-12-0 | Osmium oxide $OsO_4$, (T-4)- |
| P087 | 20816-12-0 | Osmium tetroxide |
| P088 | 145-73-3 | Endothall |
| P088 | 145-73-3 | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid |
| P089 | 56-38-2 | Parathion |
| P089 | 56-38-2 | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester |
| P092 | 62-38-4 | Mercury, (acetato-O)phenyl- |
| P092 | 62-38-4 | Phenylmercury acetate |
| P093 | 103-85-5 | Phenylthiourea |
| P093 | 103-85-5 | Thiourea, phenyl- |
| P094 | 298-02-2 | Phorate |
| P094 | 298-02-2 | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester |
| P095 | 75-44-5 | Carbonic dichloride |
| P095 | 75-44-5 | Phosgene |
| P096 | 7803-51-2 | Hydrogen phosphide |
| P096 | 7803-51-2 | Phosphine |
| P097 | 52-85-7 | Famphur |
| P097 | 52-85-7 | Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester |
| P098 | 151-50-8 | Potassium cyanide |
| P098 | 151-50-8 | Potassium cyanide K(CN) |
| P099 | 506-61-6 | Argentate(1-), bis(cyano-C)-, potassium |
| P099 | 506-61-6 | Potassium silver cyanide |
| P101 | 107-12-0 | Ethyl cyanide |
| P101 | 107-12-0 | Propanenitrile |
| P102 | 107-19-7 | Propargyl alcohol |
| P102 | 107-19-7 | 2-Propyn-1-ol |
| P103 | 630-10-4 | Selenourea |
| P104 | 506-64-9 | Silver cyanide |
| P104 | 506-64-9 | Silver cyanide Ag(CN) |
| P105 | 26628-22-8 | Sodium azide |
| P106 | 143-33-9 | Sodium cyanide |
| P106 | 143-33-9 | Sodium cyanide Na(CN) |
| P108 | [1]157-24-9 | Strychnidin-10-one, & salts |
| P108 | [1]157-24-9 | Strychnine, & salts |
| P109 | 3689-24-5 | Tetraethyldithiopyrophosphate |
| P109 | 3689-24-5 | Thiodiphosphoric acid, tetraethyl ester |
| P110 | 78-00-2 | Plumbane, tetraethyl- |
| P110 | 78-00-2 | Tetraethyl lead |
| P111 | 107-49-3 | Diphosphoric acid, tetraethyl ester |
| P111 | 107-49-3 | Tetraethyl pyrophosphate |
| P112 | 509-14-8 | Methane, tetranitro- (R) |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P112 | 509-14-8 | Tetranitromethane (R) |
| P113 | 1314-32-5 | Thallic oxide |
| P113 | 1314-32-5 | Thallium oxide $Tl_2O_3$ |
| P114 | 12039-52-0 | Selenious acid, dithallium(1+) salt |
| P114 | 12039-52-0 | Thallium(I) selenite |
| P115 | 7446-18-6 | Sulfuric acid, dithallium(1+) salt |
| P115 | 7446-18-6 | Thallium(I) sulfate |
| P116 | 79-19-6 | Hydrazinecarbothioamide |
| P116 | 79-19-6 | Thiosemicarbazide |
| P118 | 75-70-7 | Methanethiol, trichloro- |
| P118 | 75-70-7 | Trichloromethanethiol |
| P119 | 7803-55-6 | Ammonium vanadate |
| P119 | 7803-55-6 | Vanadic acid, ammonium salt |
| P120 | 1314-62-1 | Vanadium oxide$V_2O_5$ |
| P120 | 1314-62-1 | Vanadium pentoxide |
| P121 | 557-21-1 | Zinc cyanide |
| P121 | 557-21-1 | Zinc cyanide $Zn(CN)_2$ |
| P122 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% (R,T) |
| P123 | 8001-35-2 | Toxaphene |
| P127 | 1563-66-2 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate |
| P127 | 1563-66-2 | Carbofuran |
| P128 | 315-18-4 | Mexacarbate |
| P128 | 315-18-4 | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) |
| P185 | 26419-73-8 | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl] oxime |
| P185 | 26419-73-8 | Tirpate |
| P188 | 57-64-7 | 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) |
| P188 | 57-64-7 | Physostigmine salicylate |
| P189 | 55285-14-8 | Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester |
| P189 | 55285-14-8 | Carbosulfan |
| P190 | 1129-41-5 | Carbamic acid, methyl-, 3-methylphenyl ester |
| P190 | 1129-41-5 | Metolcarb |
| P191 | 644-64-4 | Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester |
| P191 | 644-64-4 | Dimetilan |
| P192 | 119-38-0 | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester |
| P192 | 119-38-0 | Isolan |
| P194 | 23135-22-0 | Ethanimidthioic acid, 2-(dimethylamino)-N-[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester |
| P194 | 23135-22-0 | Oxamyl |
| P196 | 15339-36-3 | Manganese, bis(dimethylcarbamodithioato-S,S')-, |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| P196 | 15339-36-3 | Manganese dimethyldithiocarbamate |
| P197 | 17702-57-7 | Formparanate |
| P197 | 17702-57-7 | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy] phenyl]- |
| P198 | 23422-53-9 | Formetanate hydrochloride |
| P198 | 23422-53-9 | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-monohydrochloride |
| P199 | 2032-65-7 | Methiocarb |
| P199 | 2032-65-7 | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate |
| P201 | 2631-37-0 | Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate |
| P201 | 2631-37-0 | Promecarb |
| P202 | 64-00-6 | m-Cumenyl methylcarbamate |
| P202 | 64-00-6 | 3-Isopropylphenyl N-methylcarbamate |
| P202 | 64-00-6 | Phenol, 3-(1-methylethyl)-, methylcarbamate |
| P203 | 1646-88-4 | Aldicarb sulfone |
| P203 | 1646-88-4 | Propanal, 2-methyl-2-(methyl sulfonyl)-, O-[(methylamino)carbonyl] oxime |
| P204 | 57-47-6 | Physostigmine |
| P204 | 57-47-6 | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- |
| P205 | 137-30-4 | Zinc, bis(dimethylcarbamodithioato-S,S')-, |
| P205 | 137-30-4 | Ziram |

[1]CAS number given for parent compound only.

6. The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in subsections 1 through 4, are identified as toxic wastes (T) unless otherwise designated.

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:

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U394 | 30558-43-1 | A2213 |
| U001 | 75-07-0 | Acetaldehyde (I) |
| U034 | 75-87-6 | Acetaldehyde, trichloro- |
| U187 | 62-44-2 | Acetamide, N-(4-ethoxyphenyl)- |
| U005 | 53-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| U240 | [1]94-75-7 | Acetic acid, (2,4-dichlorophenoxy)-, salts & esters |
| U112 | 141-78-6 | Acetic acid, ethyl ester (I) |
| U144 | 301-04-2 | Acetic acid, lead(2+) salt |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U214 | 563-68-8 | Acetic acid, thallium(1+) salt |
| See F027 | 93-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |
| U002 | 67-64-1 | Acetone (I) |
| U003 | 75-05-8 | Acetonitrile (I,T) |
| U004 | 98-86-2 | Acetophenone |
| U005 | 53-96-3 | 2-Acetylaminofluorene |
| U006 | 75-36-5 | Acetyl chloride (C,R,T) |
| U007 | 79-06-1 | Acrylamide |
| U008 | 79-10-7 | Acrylic acid (I) |
| U009 | 107-13-1 | Acrylonitrile |
| U011 | 61-82-5 | Amitrole |
| U012 | 62-53-3 | Aniline (I,T) |
| U136 | 75-60-5 | Arsinic acid, dimethyl- |
| U014 | 492-80-8 | Auramine |
| U015 | 115-02-6 | Azaserine |
| U010 | 50-07-7 | 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)]- |
| U280 | 101-27-9 | Barban |
| U278 | 22781-23-3 | Bendiocarb |
| U364 | 22961-82-6 | Bendiocarb phenol |
| U271 | 17804-35-2 | Benomyl |
| U157 | 56-49-5 | Benz[j[aceanthrylene, 1,2-dihydro-3-methyl- |
| U016 | 225-51-4 | Benz[c]acridine |
| U017 | 98-87-3 | Benzal chloride |
| U192 | 23950-58-5 | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- |
| U018 | 56-55-3 | Benz[a]anthracene |
| U094 | 57-97-6 | Benz[a]anthracene, 7,12-dimethyl- |
| U012 | 62-53-3 | Benzenamine (I,T) |
| U014 | 492-80-8 | Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl- |
| U049 | 3165-93-3 | Benzenamine, 4-chloro-2-methyl-, hydrochloride |
| U093 | 60-11-7 | Benzenamine, N,N-dimethyl-4-(phenylazo)- |
| U328 | 95-53-4 | Benzenamine, 2-methyl- |
| U353 | 106-49-0 | Benzenamine, 4-methyl- |
| U158 | 101-14-4 | Benzenamine, 4,4'-methylenebis[2-chloro- |
| U222 | 636-21-5 | Benzenamine, 2-methyl-, hydrochloride |
| U181 | 99-55-8 | Benzenamine, 2-methyl-5-nitro- |
| U019 | 71-43-2 | Benzene (I,T) |
| U038 | 510-15-6 | Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester |
| U030 | 101-55-3 | Benzene, 1-bromo-4-phenoxy- |
| U035 | 305-03-3 | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U037 | 108-90-7 | Benzene, chloro- |
| U221 | 25376-45-8 | Benzenediamine, ar-methyl- |
| U028 | 117-81-7 | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester |
| U069 | 84-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| U088 | 84-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| U102 | 131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| U107 | 117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| U070 | 95-50-1 | Benzene, 1,2-dichloro- |
| U071 | 541-73-1 | Benzene, 1,3-dichloro- |
| U072 | 106-46-7 | Benzene, 1,4-dichloro- |
| U060 | 72-54-8 | Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro- |
| U017 | 98-87-3 | Benzene, (dichloromethyl)- |
| U223 | 26471-62-5 | Benzene, 1,3-diisocyanatomethyl- (R,T) |
| U239 | 1330-20-7 | Benzene, dimethyl- (I) |
| U201 | 108-46-3 | 1,3-Benzenediol |
| U127 | 118-74-1 | Benzene, hexachloro- |
| U056 | 110-82-7 | Benzene, hexahydro- (I) |
| U220 | 108-88-3 | Benzene, methyl- |
| U105 | 121-14-2 | Benzene, 1-methyl-2,4-dinitro- |
| U106 | 606-20-2 | Benzene, 2-methyl-1,3-dinitro- |
| U055 | 98-82-8 | Benzene, (1-methylethyl)- (I) |
| U169 | 98-95-3 | Benzene, nitro- |
| U183 | 608-93-5 | Benzene, pentachloro- |
| U185 | 82-68-8 | Benzene, pentachloronitro- |
| U020 | 98-09-9 | Benzenesulfonic acid chloride (C,R) |
| U020 | 98-09-9 | Benzenesulfonyl chloride (C,R) |
| U207 | 95-94-3 | Benzene, 1,2,4,5-tetrachloro- |
| U061 | 50-29-3 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro- |
| U247 | 72-43-5 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- |
| U023 | 98-07-7 | Benzene, (trichloromethyl)- |
| U234 | 99-35-4 | Benzene, 1,3,5-trinitro- |
| U021 | 92-87-5 | Benzidine |
| U278 | 22781-23-3 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methylcarbamate |
| U364 | 22961-82-6 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- |
| U203 | 94-59-7 | 1,3-Benzodioxole, 5-(2-propenyl)- |
| U141 | 120-58-1 | 1,3-Benzodioxole, 5-(1-propenyl)- |
| U090 | 94-58-6 | 1,3-Benzodioxole, 5-propyl- |
| U367 | 1563-38-8 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- |
| U064 | 189-55-9 | Benzo[rst]pentaphene |
| U248 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl butyl)-, & salts, when present at concentrations of 0.3% or less |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U022 | 50-32-8 | Benzo[a]pyrene |
| U197 | 106-51-4 | p-Benzoquinone |
| U023 | 98-07-7 | Benzotrichloride (C,R,T) |
| U085 | 1464-53-5 | 2,2'-Bioxirane |
| U021 | 92-87-5 | [1,1'-Biphenyl]-4,4'-diamine |
| U073 | 91-94-1 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- |
| U091 | 119-90-4 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- |
| U095 | 119-93-7 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- |
| U225 | 75-25-2 | Bromoform |
| U030 | 101-55-3 | 4-Bromophenyl phenyl ether |
| U128 | 87-68-3 | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- |
| U172 | 924-16-3 | 1-Butanamine, N-butyl-N-nitroso- |
| U031 | 71-36-3 | 1-Butanol (I) |
| U159 | 78-93-3 | 2-Butanone (I,T) |
| U160 | 1338-23-4 | 2-Butanone peroxide (R,T) |
| U053 | 4170-30-3 | 2-Butenal |
| U074 | 764-41-0 | 2-Butene, 1,4-dichloro- (I,T) |
| U143 | 303-34-4 | 2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethy)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a -tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]- |
| U031 | 71-36-3 | n-Butyl alcohol (I) |
| U136 | 75-60-5 | Cacodylic acid |
| U032 | 13765-19-0 | Calcium chromate |
| U372 | 10605-21-7 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester |
| U271 | 17804-35-2 | Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester |
| U280 | 101-27-9 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester |
| U238 | 51-79-6 | Carbamic acid, ethyl ester |
| U178 | 615-53-2 | Carbamic acid, methylnitroso-, ethyl ester |
| U373 | 122-42-9 | Carbamic acid, phenyl-, 1-methylethyl ester |
| U409 | 23564-05-8 | Carbamic acid, [1,2-phenylenebis(iminocarbonothioyl)]bis-, dimethyl ester |
| U097 | 79-44-7 | Carbamic chloride, dimethyl- |
| U114 | [1]111-54-6 | Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters |
| U062 | 2303-16-4 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester |
| U389 | 2303-17-5 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester |
| U387 | 52888-80-9 | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester |
| U279 | 63-25-2 | Carbaryl |
| U372 | 10605-21-7 | Carbendazim |
| U367 | 1563-38-8 | Carbofuran phenol |
| U215 | 6533-73-9 | Carbonic acid, dithallium(1+) salt |
| U033 | 353-50-4 | Carbon difluoride |
| U156 | 79-22-1 | Carbonochloridic acid, methyl ester (I,T) |
| U033 | 353-50-4 | Carbon oxyfluoride (R,T) |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U211 | 56-23-5 | Carbon tetrachloride |
| U034 | 75-87-6 | Chloral |
| U035 | 305-03-3 | Chlorambucil |
| U036 | 57-74-9 | Chlordane, alpha & gamma isomers |
| U026 | 494-03-1 | Chlornaphazine |
| U037 | 108-90-7 | Chlorobenzene |
| U038 | 510-15-6 | Chlorobenzilate |
| U039 | 59-50-7 | 4-Chloro-m-cresol |
| U042 | 110-75-8 | 2-Chloroethyl vinyl ether |
| U044 | 67-66-3 | Chloroform |
| U046 | 107-30-2 | Chloromethyl methyl ether |
| U047 | 91-58-7 | beta-Chloronaphthalene |
| U048 | 95-57-8 | o-Chlorophenol |
| U049 | 3165-93-3 | 4-Chloro-o-toluidine, hydrochloride |
| U032 | 13765-19-0 | Chromic acid $H_2CrO_4$, calcium salt |
| U050 | 218-01-9 | Chrysene |
| U051 | ..... | Creosote |
| U052 | 1319-77-3 | Cresol (Cresylic acid) |
| U053 | 4170-30-3 | Crotonaldehyde |
| U055 | 98-82-8 | Cumene (I) |
| U246 | 506-68-3 | Cyanogen bromide (CN)Br |
| U197 | 106-51-4 | 2,5-Cyclohexadiene-1,4-dione |
| U056 | 110-82-7 | Cyclohexane (I) |
| U129 | 58-89-9 | Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta) |
| U057 | 108-94-1 | Cyclohexanone (I) |
| U130 | 77-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| U058 | 50-18-0 | Cyclophosphamide |
| U240 | [1]94-75-7 | 2,4-D, salts & esters |
| U059 | 20830-81-3 | Daunomycin |
| U060 | 72-54-8 | DDD |
| U061 | 50-29-3 | DDT |
| U062 | 2303-16-4 | Diallate |
| U063 | 53-70-3 | Dibenz[a,h]anthracene |
| U064 | 189-55-9 | Dibenzo[a,i]pyrene |
| U066 | 96-12-8 | 1,2-Dibromo-3-chloropropane |
| U069 | 84-74-2 | Dibutyl phthalate |
| U070 | 95-50-1 | o-Dichlorobenzene |
| U071 | 541-73-1 | m-Dichlorobenzene |
| U072 | 106-46-7 | p-Dichlorobenzene |
| U073 | 91-94-1 | 3,3'-Dichlorobenzidine |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U074 | 764-41-0 | 1,4-Dichloro-2-butene (I,T) |
| U075 | 75-71-8 | Dichlorodifluoromethane |
| U078 | 75-35-4 | 1,1-Dichloroethylene |
| U079 | 156-60-5 | 1,2-Dichloroethylene |
| U025 | 111-44-4 | Dichloroethyl ether |
| U027 | 108-60-1 | Dichloroisopropyl ether |
| U024 | 111-91-1 | Dichloromethoxy ethane |
| U081 | 120-83-2 | 2,4-Dichlorophenol |
| U082 | 87-65-0 | 2,6-Dichlorophenol |
| U084 | 542-75-6 | 1,3-Dichloropropene |
| U085 | 1464-53-5 | 1,2:3,4-Diepoxybutane (I,T) |
| U395 | 5952-26-1 | Diethylene glycol, dicarbamate |
| U108 | 123-91-1 | 1,4-Diethyleneoxide |
| U028 | 117-81-7 | Diethylhexyl phthalate |
| U086 | 1615-80-1 | N,N'-Diethylhydrazine |
| U087 | 3288-58-2 | O,O-Diethyl S-methyl dithiophosphate |
| U088 | 84-66-2 | Diethyl phthalate |
| U089 | 56-53-1 | Diethylstilbesterol |
| U090 | 94-58-6 | Dihydrosafrole |
| U091 | 119-90-4 | 3,3'-Dimethoxybenzidine |
| U092 | 124-40-3 | Dimethylamine (I) |
| U093 | 60-11-7 | p-Dimethylaminoazobenzene |
| U094 | 57-97-6 | 7,12-Dimethylbenz[a]anthracene |
| U095 | 119-93-7 | 3,3'-Dimethylbenzidine |
| U096 | 80-15-9 | alpha,alpha-Dimethylbenzlhydroperoxide (R) |
| U097 | 79-44-7 | Dimethylcarbamoyl chloride |
| U098 | 57-14-7 | 1,1-Dimethylhydrazine |
| U099 | 540-73-8 | 1,2-Dimethylhydrazine |
| U101 | 105-67-9 | 2,4-Dimethylphenol |
| U102 | 131-11-3 | Dimethyl phthalate |
| U103 | 77-78-1 | Dimethyl sulfate |
| U105 | 121-14-2 | 2,4-Dinitrotoluene |
| U106 | 606-20-2 | 2,6-Dinitrotoluene |
| U107 | 117-84-0 | Di-n-octyl phthalate |
| U108 | 123-91-1 | 1,4-Dioxane |
| U109 | 122-66-7 | 1,2-Diphenylhydrazine |
| U110 | 142-84-7 | Dipropylamine (I) |
| U111 | 621-64-7 | Di-n-propylnitrosamine |
| U041 | 106-89-8 | Epichlorohydrin |
| U001 | 75-07-0 | Ethanal (I) |
| U174 | 55-18-5 | Ethanamine, N-ethyl-N-nitroso- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U404 | 121-44-8 | Ethanamine, N,N-diethyl- |
| U155 | 91-80-5 | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- |
| U067 | 106-93-4 | Ethane, 1,2-dibromo- |
| U076 | 75-34-3 | Ethane, 1,1-dichloro- |
| U077 | 107-06-2 | Ethane, 1,2-dichloro- |
| U131 | 67-72-1 | Ethane, hexachloro- |
| U024 | 111-91-1 | Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- |
| U117 | 60-29-7 | Ethane, 1,1'-oxybis- (I) |
| U025 | 111-44-4 | Ethane, 1,1'-oxybis[2-chloro- |
| U184 | 76-01-7 | Ethane, pentachloro- |
| U208 | 630-20-6 | Ethane, 1,1,1,2-tetrachloro- |
| U209 | 79-34-5 | Ethane, 1,1,2,2-tetrachloro- |
| U218 | 62-55-5 | Ethanethioamide |
| U226 | 71-55-6 | Ethane, 1,1,1-trichloro- |
| U227 | 79-00-5 | Ethane, 1,1,2-trichloro- |
| U394 | 30558-43-1 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester. |
| U410 | 59669-26-0 | Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester |
| U359 | 110-80-5 | Ethanol, 2-ethoxy- |
| U173 | 1116-54-7 | Ethanol, 2,2'-(nitrosoimino)bis- |
| U395 | 5952-26-1 | Ethanol, 2,2'-oxybis-, dicarbamate |
| U004 | 98-86-2 | Ethanone, 1-phenyl- |
| U043 | 75-01-4 | Ethene, chloro- |
| U042 | 110-75-8 | Ethene, (2-chloroethoxy)- |
| U078 | 75-35-4 | Ethene, 1,1-dichloro- |
| U079 | 156-60-5 | Ethene, 1,2-dichloro-, (E)- |
| U210 | 127-18-4 | Ethene, tetrachloro- |
| U228 | 79-01-6 | Ethene, trichloro- |
| U112 | 141-78-6 | Ethyl acetate (I) |
| U113 | 140-88-5 | Ethyl acrylate (I) |
| U238 | 51-79-6 | Ethyl carbamate (urethane) |
| U117 | 60-29-7 | Ethyl ether (I) |
| U114 | [1]111-54-6 | Ethylenebisdithiocarbamic acid, salts & esters |
| U067 | 106-93-4 | Ethylene dibromide |
| U077 | 107-06-2 | Ethylene dichloride |
| U359 | 110-80-5 | Ethylene glycol monoethyl ether |
| U115 | 75-21-8 | Ethylene oxide (I,T) |
| U116 | 96-45-7 | Ethylenethiourea |
| U076 | 75-34-3 | Ethylidene dichloride |
| U118 | 97-63-2 | Ethyl methacrylate |
| U119 | 62-50-0 | Ethyl methanesulfonate |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U120 | 206-44-0 | Fluoranthene |
| U122 | 50-00-0 | Formaldehyde |
| U123 | 64-18-6 | Formic acid (C,T) |
| U124 | 110-00-9 | Furan (I) |
| U125 | 98-01-1 | 2-Furancarboxaldehyde (I) |
| U147 | 108-31-6 | 2,5-Furandione |
| U213 | 109-99-9 | Furan, tetrahydro- (I) |
| U125 | 98-01-1 | Furfural (I) |
| U124 | 110-00-9 | Furfuran (I) |
| U206 | 18883-66-4 | Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)-, D- |
| U206 | 18883-66-4 | D-Glucose, 2-deoxy-2-[[(methylnitrosoamino) carbonyl]amino]- |
| U126 | 765-34-4 | Glycidylaldehyde |
| U163 | 70-25-7 | Guanidine, N-methyl-N'-nitro-N-nitroso- |
| U127 | 118-74-1 | Hexachlorobenzene |
| U128 | 87-68-3 | Hexachlorobutadiene |
| U130 | 77-47-4 | Hexachlorocyclopentadiene |
| U131 | 67-72-1 | Hexachloroethane |
| U132 | 70-30-4 | Hexachlorophene |
| U243 | 1888-71-7 | Hexachloropropene |
| U133 | 302-01-2 | Hydrazine (R,T) |
| U086 | 1615-80-1 | Hydrazine, 1,2-diethyl- |
| U098 | 57-14-7 | Hydrazine, 1,1-dimethyl- |
| U099 | 540-73-8 | Hydrazine, 1,2-dimethyl- |
| U109 | 122-66-7 | Hydrazine, 1,2-diphenyl- |
| U134 | 7664-39-3 | Hydrofluoric acid (C,T) |
| U134 | 7664-39-3 | Hydrogen fluoride (C,T) |
| U135 | 7783-06-4 | Hydrogen sulfide |
| U135 | 7783-06-4 | Hydrogen sulfide $H_2S$ |
| U096 | 80-15-9 | Hydroperoxide, 1-methyl-1-phenylethyl- (R) |
| U116 | 96-45-7 | 2-Imidazolidinethione |
| U137 | 193-39-5 | Indeno[1,2,3-cd]pyrene |
| U190 | 85-44-9 | 1,3-Isobenzofurandione |
| U140 | 78-83-1 | Isobutyl alcohol (I,T) |
| U141 | 120-58-1 | Isosafrole |
| U142 | 143-50-0 | Kepone |
| U143 | 303-34-4 | Lasiocarpine |
| U144 | 301-04-2 | Lead acetate |
| U146 | 1335-32-6 | Lead, bis(acetato-O)tetrahydroxytri- |
| U145 | 7446-27-7 | Lead phosphate |
| U146 | 1335-32-6 | Lead subacetate |
| U129 | 58-89-9 | Lindane |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U163 | 70-25-7 | MNNG |
| U147 | 108-31-6 | Maleic anhydride |
| U148 | 123-33-1 | Maleic hydrazide |
| U149 | 109-77-3 | Malononitrile |
| U150 | 148-82-3 | Melphalan |
| U151 | 7439-97-6 | Mercury |
| U152 | 126-98-7 | Methacrylonitrile (I,T) |
| U092 | 124-40-3 | Methanamine, N-methyl- (I) |
| U029 | 74-83-9 | Methane, bromo- |
| U045 | 74-87-3 | Methane, chloro- (I,T) |
| U046 | 107-30-2 | Methane, chloromethoxy- |
| U068 | 74-95-3 | Methane, dibromo- |
| U080 | 75-09-2 | Methane, dichloro- |
| U075 | 75-71-8 | Methane, dichlorodifluoro- |
| U138 | 74-88-4 | Methane, iodo- |
| U119 | 62-50-0 | Methanesulfonic acid, ethyl ester |
| U211 | 56-23-5 | Methane, tetrachloro- |
| U153 | 74-93-1 | Methanethiol (I,T) |
| U225 | 75-25-2 | Methane, tribromo- |
| U044 | 67-66-3 | Methane, trichloro- |
| U121 | 75-69-4 | Methane, trichlorofluoro- |
| 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- |
| U154 | 67-56-1 | Methanol (I) |
| U155 | 91-80-5 | Methapyrilene |
| U142 | 143-50-0 | 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachloroctahydro- |
| U247 | 72-43-5 | Methoxychlor |
| U154 | 67-56-1 | Methyl alcohol (I) |
| U029 | 74-83-9 | Methyl bromide |
| U186 | 504-60-9 | 1-Methylbutadiene (I) |
| U045 | 74-87-3 | Methyl chloride (I,T) |
| U156 | 79-22-1 | Methyl chlorocarbonate (I,T) |
| U226 | 71-55-6 | Methyl chloroform |
| U157 | 56-49-5 | 3-Methylcholanthrene |
| U158 | 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) |
| U068 | 74-95-3 | Methylene bromide |
| U080 | 75-09-2 | Methylene chloride |
| U159 | 78-93-3 | Methyl ethyl ketone (MEK) (I,T) |
| U160 | 1338-23-4 | Methyl ethyl ketone peroxide (R,T) |
| U138 | 74-88-4 | Methyl iodide |
| U161 | 108-10-1 | Methyl isobutyl ketone (I) |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U162 | 80-62-6 | Methyl methacrylate (I,T) |
| U161 | 108-10-1 | 4-Methyl-2-pentanone (I) |
| U164 | 56-04-2 | Methylthiouracil |
| U010 | 50-07-7 | Mitomycin C |
| U059 | 20830-81-3 | 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)- |
| U167 | 134-32-7 | 1-Naphthalenamine |
| U168 | 91-59-8 | 2-Naphthalenamine |
| U026 | 494-03-1 | Naphthalenamine, N,N'-bis(2-chloroethyl)- |
| U165 | 91-20-3 | Naphthalene |
| U047 | 91-58-7 | Naphthalene, 2-chloro- |
| U166 | 130-15-4 | 1,4-Naphthalenedione |
| U236 | 72-57-1 | 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]bis[5-amino-4-hydroxy]-, tetrasodium salt |
| U279 | 63-25-2 | 1-Naphthalenol, methylcarbamate |
| U166 | 130-15-4 | 1,4-Naphthoquinone |
| U167 | 134-2-7 | alpha-Naphthylamine |
| U168 | 91-59-8 | beta-Naphthylamine |
| U217 | 10102-45-1 | Nitric acid, thallium(1+) salt |
| U169 | 98-95-3 | Nitrobenzene (I,T) |
| U170 | 100-02-7 | p-Nitrophenol |
| U171 | 79-46-9 | 2-Nitropropane (I,T) |
| U172 | 924-16-3 | N-Nitrosodi-n-butylamine |
| U173 | 1116-54-7 | N-Nitrosodiethanolamine |
| U174 | 55-18-5 | N-Nitrosodiethylamine |
| U176 | 759-73-9 | N-Nitroso-N-ethylurea |
| U177 | 684-93-5 | N-Nitroso-N-methylurea |
| U178 | 615-53-2 | N-Nitroso-N-methylurethane |
| U179 | 100-75-4 | N-Nitrosopiperidine |
| U180 | 930-55-2 | N-Nitrosopyrrolidine |
| U181 | 99-55-8 | 5-Nitro-O-toluidine |
| U193 | 1120-71-4 | 1,2-Oxathiolane, 2,2-dioxide |
| U058 | 50-18-0 | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide |
| U115 | 75-21-8 | Oxirane (I,T) |
| U126 | 765-34-4 | Oxiranecarboxyaldehyde |
| U041 | 106-89-8 | Oxirane, (chloromethyl)- |
| U182 | 123-63-7 | Paraldehyde |
| U183 | 608-93-5 | Pentachlorobenzene |
| U184 | 76-01-7 | Pentachloroethane |
| U185 | 82-68-8 | Pentachloronitrobenzene (PCNB) |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| See F027 | 87-86-5 | Pentachlorophenol |
| U161 | 108-10-1 | Pentanol, 4-methyl- |
| U186 | 504-60-9 | 1,3-Pentadiene (I) |
| U187 | 62-44-2 | Phenacetin |
| U188 | 108-95-2 | Phenol |
| U048 | 95-57-8 | Phenol, 2-chloro- |
| U039 | 59-50-7 | Phenol, 4-chloro-3-methyl- |
| U081 | 120-83-2 | Phenol, 2,4-dichloro- |
| U082 | 87-65-0 | Phenol, 2,6-dichloro- |
| U089 | 56-53-1 | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- |
| U101 | 105-67-9 | Phenol, 2,4-dimethyl- |
| U052 | 1319-77-3 | Phenol, methyl- |
| U132 | 70-30-4 | Phenol, 2,2'-methylenebis[3,4,6-trichloro- |
| U411 | 114-26-1 | Phenol, 2-(1-methylethoxy)-, methylcarbamate |
| U170 | 100-02-7 | Phenol, 4-nitro- |
| See F027 | 87-86-5 | Phenol, pentachloro- |
| See F027 | 58-90-2 | Phenol, 2,3,4,6-tetrachloro- |
| See F027 | 95-95-4 | Phenol, 2,4,5-trichloro- |
| See F027 | 88-06-2 | Phenol, 2,4,6-trichloro- |
| U150 | 148-82-3 | L-Phenylalanine, 4-[bis(2-chloroethyl)amino]- |
| U145 | 7446-27-7 | Phosphoric acid, lead(2+) salt (2:3) |
| U087 | 3288-58-2 | Phosphorodithioic acid, O,O-diethyl S-methyl ester |
| U189 | 1314-80-3 | Phosphorus sulfide (R) |
| U190 | 85-44-9 | Phthalic anhydride |
| U191 | 109-06-8 | 2-Picoline |
| U179 | 100-75-4 | Piperidine, 1-nitroso- |
| U192 | 23950-58-5 | Pronamide |
| U194 | 107-10-8 | 1-Propanamine (I,T) |
| U111 | 621-64-7 | 1-Propanamine, N-nitroso-N-propyl- |
| U110 | 142-84-7 | 1-Propanamine, N-propyl- (I) |
| U066 | 96-12-8 | Propane, 1,2-dibromo-3-chloro- |
| U083 | 78-87-5 | Propane, 1,2-dichloro- |
| U149 | 109-77-3 | Propanedinitrile |
| U171 | 79-46-9 | Propane, 2-nitro- (I,T) |
| U027 | 108-60-1 | Propane, 2,2'-oxybis[2-chloro- |
| U193 | 1120-71-4 | 1,3-Propane sultone |
| See F027 | 93-72-1 | Propanoic acid, 2-(2,4,5-trichlorophenoxy)- |
| U235 | 126-72-7 | 1-Propanol, 2,3-dibromo-, phosphate (3:1) |
| U140 | 78-83-1 | 1-Propanol, 2-methyl- (I,T) |
| U002 | 67-64-1 | 2-Propanone (I) |
| U007 | 79-06-1 | 2-Propenamide |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U084 | 542-75-6 | 1-Propene, 1,3-dichloro- |
| U243 | 1888-71-7 | 1-Propene, 1,1,2,3,3,3-hexachloro- |
| U009 | 107-13-1 | 2-Propenenitrile |
| U152 | 126-98-7 | 2-Propenenitrile, 2-methyl- (I,T) |
| U008 | 79-10-7 | 2-Propenoic acid (I) |
| U113 | 140-88-5 | 2-Propenoic acid, ethyl ester (I) |
| U118 | 97-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |
| U162 | 80-62-6 | 2-Propenoic acid, 2-methyl-, methyl ester (I,T) |
| U373 | 122-42-9 | Propham |
| U411 | 114-26-1 | Propoxur |
| U194 | 107-10-8 | n-Propylamine (I,T) |
| U083 | 78-87-5 | Propylene dichloride |
| U387 | 52888-80-9 | Prosulfocarb |
| U148 | 123-33-1 | 3,6-Pyridazinedione, 1,2-dihydro- |
| U196 | 110-86-1 | Pyridine |
| U191 | 109-06-8 | Pyridine, 2-methyl- |
| U237 | 66-75-1 | 2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]- |
| U164 | 56-04-2 | 4-(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- |
| U180 | 930-55-2 | Pyrrolidine, 1-nitroso- |
| U200 | 50-55-5 | Reserpine |
| U201 | 108-46-3 | Resorcinol |
| U203 | 94-59-7 | Safrole |
| U204 | 7783-00-8 | Selenious acid |
| U204 | 7783-00-8 | Selenium dioxide |
| U205 | 7488-56-4 | Selenium sulfide |
| U205 | 7488-56-4 | Selenium sulfide $SeS_2$ (R,T) |
| U015 | 115-02-6 | L-Serine, diazoacetate (ester) |
| See F027 | 93-72-1 | Silvex (2,4,5-TP) |
| U206 | 18883-66-4 | Streptozotocin |
| U103 | 77-78-1 | Sulfuric acid, dimethyl ester |
| U189 | 1314-80-3 | Sulfur phosphide (R) |
| See F027 | 93-76-5 | 2,4,5-T |
| U207 | 95-94-3 | 1,2,4,5-Tetrachlorobenzene |
| U208 | 630-20-6 | 1,1,1,2-Tetrachloroethane |
| U209 | 79-34-5 | 1,1,2,2-Tetrachloroethane |
| U210 | 127-18-4 | Tetrachloroethylene |
| See F027 | 58-90-2 | 2,3,4,6-Tetrachlorophenol |
| U213 | 109-99-9 | Tetrahydrofuran (I) |
| U214 | 563-68-8 | Thallium(I) acetate |
| U215 | 6533-73-9 | Thallium(I) carbonate |
| U216 | 7791-12-0 | Thallium(I) chloride |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U216 | 7791-12-0 | Thallium chloride TlCl |
| U217 | 10102-45-1 | Thallium(I) nitrate |
| U218 | 62-55-5 | Thioacetamide |
| U410 | 59669-26-0 | Thiodicarb |
| U153 | 74-93-1 | Thiomethanol (I,T) |
| U244 | 137-26-8 | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- |
| U409 | 23564-05-8 | Thiophanate-methyl |
| U219 | 62-56-6 | Thiourea |
| U244 | 137-26-8 | Thiram |
| U220 | 108-88-3 | Toluene |
| U221 | 25376-45-8 | Toluenediamine |
| U223 | 26471-62-5 | Toluene diisocyanate (R,T) |
| U328 | 95-53-4 | o-Toluidine |
| U353 | 106-49-0 | p-Toluidine |
| U222 | 636-21-5 | o-Toluidine hydrochloride |
| U389 | 2303-17-5 | Triallate |
| U011 | 61-82-5 | 1H-1,2,4-Triazol-3-amine |
| U408 | 118-79-6 | 2,4,6-Tribromophenol |
| U226 | 71-55-6 | 1,1,1-Trichloroethane |
| U227 | 79-00-5 | 1,1,2-Trichloroethane |
| U228 | 79-01-6 | Trichloroethylene |
| U121 | 75-69-4 | Trichloromonofluoromethane |
| See F027 | 95-95-4 | 2,4,5-Trichlorophenol |
| See F027 | 88-06-2 | 2,4,6-Trichlorophenol |
| U404 | 121-44-8 | Triethylamine |
| U234 | 99-35-4 | 1,3,5-Trinitrobenzene (R,T) |
| U182 | 123-63-7 | 1,3,5-Trioxane, 2,4,6-trimethyl- |
| U235 | 126-72-7 | Tris (2,3-dibromopropyl) phosphate |
| U236 | 72-57-1 | Trypan blue |
| U237 | 66-75-1 | Uracil mustard |
| U176 | 759-73-9 | Urea, N-ethyl-N-nitroso- |
| U177 | 684-93-5 | Urea, N-methyl-N-nitroso- |
| U043 | 75-01-4 | Vinyl chloride |
| U248 | [1]81-81-2 | Warfarin, and salts, when present at concentrations of 0.3% or less |
| U239 | 1330-20-7 | Xylene (I) |
| U200 | 50-55-5 | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)- |
| U249 | 1314-84-7 | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10% or less |
| U001 | 75-07-0 | Acetaldehyde (I) |
| U001 | 75-07-0 | Ethanal (I) |
| U002 | 67-64-1 | Acetone (I) |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U002 | 67-64-1 | 2-Propanone (I) |
| U003 | 75-05-8 | Acetonitrile (I,T) |
| U004 | 98-86-2 | Acetophenone |
| U004 | 98-86-2 | Ethanone, 1-phenyl- |
| U005 | 53-96-3 | Acetamide, N-9H-fluoren-2-yl- |
| U005 | 53-96-3 | 2-Acetylaminofluorene |
| U006 | 75-36-5 | Acetyl chloride (C,R,T) |
| U007 | 79-06-1 | Acrylamide |
| U007 | 79-06-1 | 2-Propenamide |
| U008 | 79-10-7 | Acrylic acid (I) |
| U008 | 79-10-7 | 2-Propenoic acid (I) |
| U009 | 107-13-1 | Acrylonitrile |
| U009 | 107-13-1 | 2-Propenenitrile |
| U010 | 50-07-7 | 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)]- |
| U010 | 50-07-7 | Mitomycin C |
| U011 | 61-82-5 | Amitrole |
| U011 | 61-82-5 | 1H-1,2,4-Triazol-3-amine |
| U012 | 62-53-3 | Aniline (I,T) |
| U012 | 62-53-3 | Benzenamine (I,T) |
| U014 | 492-80-8 | Auramine |
| U014 | 492-80-8 | Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl- |
| U015 | 115-02-6 | Azaserine |
| U015 | 115-02-6 | L-Serine, diazoacetate (ester) |
| U016 | 225-51-4 | Benz[c]acridine |
| U017 | 98-87-3 | Benzalchloride |
| U017 | 98-87-3 | Benzene, (dichloromethyl)- |
| U018 | 56-55-3 | Benz[a]anthracene |
| U019 | 71-43-2 | Benzene (I,T) |
| U020 | 98-09-9 | Benzenesulfonic acid chloride (C,R) |
| U020 | 98-09-9 | Benzenesulfonyl chloride (C,R) |
| U021 | 92-87-5 | Benzidine |
| U021 | 92-87-5 | [1,1'-Biphenyl]-4,4'-diamine |
| U022 | 50-32-8 | Benzo[a]pyrene |
| U023 | 98-07-7 | Benzene, (trichloromethyl)- |
| U023 | 98-07-7 | Benzotrichloride (C,R,T) |
| U024 | 111-91-1 | Dichloromethoxy ethane |
| U024 | 111-91-1 | Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- |
| U025 | 111-44-4 | Dichloroethyl ether |
| U025 | 111-44-4 | Ethane, 1,1'-oxybis[2-chloro- |
| U026 | 494-03-1 | Chlornaphazin |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U026 | 494-03-1 | Naphthalenamine, N,N'-bis(2-chloroethyl)- |
| U027 | 108-60-1 | Dichloroisopropyl ether |
| U027 | 108-60-1 | Propane, 2,2'-oxybis[2-chloro- |
| U028 | 117-81-7 | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester |
| U028 | 117-81-7 | Diethylhexyl phthalate |
| U029 | 74-83-9 | Methane, bromo- |
| U029 | 74-83-9 | Methyl bromide |
| U030 | 101-55-3 | Benzene, 1-bromo-4-phenoxy- |
| U030 | 101-55-3 | 4-Bromophenyl phenyl ether |
| U031 | 71-36-3 | 1-Butanol (I) |
| U031 | 71-36-3 | n-Butyl alcohol (I) |
| U032 | 13765-19-0 | Calcium chromate |
| U032 | 13765-19-0 | Chromic acid $H_2CrO_4$, calcium salt |
| U033 | 353-50-4 | Carbonic difluoride |
| U033 | 353-50-4 | Carbon oxyfluoride (R,T) |
| U034 | 75-87-6 | Acetaldehyde, trichloro- |
| U034 | 75-87-6 | Chloral |
| U035 | 305-03-3 | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- |
| U035 | 305-03-3 | Chlorambucil |
| 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- (I,T) |
| U045 | 74-87-3 | Methyl chloride (I,T) |
| U046 | 107-30-2 | Chloromethyl methyl ether |
| U046 | 107-30-2 | Methane, chloromethoxy- |
| U047 | 91-58-7 | beta-Chloronaphthalene |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| 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)- (I) |
| U055 | 98-82-8 | Cumene (I) |
| U056 | 110-82-7 | Benzene, hexahydro- (I) |
| U056 | 110-82-7 | Cyclohexane (I) |
| U057 | 108-94-1 | Cyclohexanone (I) |
| U058 | 50-18-0 | Cyclophosphamide |
| U058 | 50-18-0 | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide |
| U059 | 20830-81-3 | Daunomycin |
| U059 | 20830-81-3 | 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)- |
| U060 | 72-54-8 | Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro- |
| U060 | 72-54-8 | DDD |
| U061 | 50-29-3 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro- |
| U061 | 50-29-3 | DDT |
| U062 | 2303-16-4 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester |
| U062 | 2303-16-4 | Diallate |
| U063 | 53-70-3 | Dibenz[a,h]anthracene |
| U064 | 189-55-9 | Benzo[rst]pentaphene |
| U064 | 189-55-9 | Dibenzo[a,i]pyrene |
| U066 | 96-12-8 | 1,2-Dibromo-3-chloropropane |
| U066 | 96-12-8 | Propane, 1,2-dibromo-3-chloro- |
| U067 | 106-93-4 | Ethane, 1,2-dibromo- |
| U067 | 106-93-4 | Ethylene dibromide |
| U068 | 74-95-3 | Methane, dibromo- |
| U068 | 74-95-3 | Methylene bromide |
| U069 | 84-74-2 | 1,2-Benzenedicarboxylic acid, dibutyl ester |
| U069 | 84-74-2 | Dibutyl phthalate |
| U070 | 95-50-1 | Benzene, 1,2-dichloro- |
| U070 | 95-50-1 | o-Dichlorobenzene |
| U071 | 541-73-1 | Benzene, 1,3-dichloro- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U071 | 541-73-1 | m-Dichlorobenzene |
| U072 | 106-46-7 | Benzene, 1,4-dichloro- |
| U072 | 106-46-7 | p-Dichlorobenzene |
| U073 | 91-94-1 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- |
| U073 | 91-94-1 | 3,3'-Dichlorobenzidine |
| U074 | 764-41-0 | 2-Butene, 1,4-dichloro- (I,T) |
| U074 | 764-41-0 | 1,4-Dichloro-2-butene (I,T) |
| U075 | 75-71-8 | Dichlorodifluoromethane |
| U075 | 75-71-8 | Methane, dichlorodifluoro- |
| U076 | 75-34-3 | Ethane, 1,1-dichloro- |
| U076 | 75-34-3 | Ethylidene dichloride |
| U077 | 107-06-2 | Ethane, 1,2-dichloro- |
| U077 | 107-06-2 | Ethylene dichloride |
| U078 | 75-35-4 | 1,1-Dichloroethylene |
| U078 | 75-35-4 | Ethene, 1,1-dichloro- |
| U079 | 156-60-5 | 1,2-Dichloroethylene |
| U079 | 156-60-5 | Ethene, 1,2-dichloro-, (E)- |
| U080 | 75-09-2 | Methane, dichloro- |
| U080 | 75-09-2 | Methylene chloride |
| U081 | 120-83-2 | 2,4-Dichlorophenol |
| U081 | 120-83-2 | Phenol, 2,4-dichloro- |
| U082 | 87-65-0 | 2,6-Dichlorophenol |
| U082 | 87-65-0 | Phenol, 2,6-dichloro- |
| U083 | 78-87-5 | Propane, 1,2-dichloro- |
| U083 | 78-87-5 | Propylene dichloride |
| U084 | 542-75-6 | 1,3-Dichloropropene |
| U084 | 542-75-6 | 1-Propene, 1,3-dichloro- |
| U085 | 1464-53-5 | 2,2'-Bioxirane |
| U085 | 1464-53-5 | 1,2:3,4-Diepoxybutane (I,T) |
| U086 | 1615-80-1 | N,N'-Diethylhydrazine |
| U086 | 1615-80-1 | Hydrazine, 1,2-diethyl- |
| U087 | 3288-58-2 | O,O-Diethyl S-methyl dithiophosphate |
| U087 | 3288-58-2 | Phosphorodithioic acid, O,O-diethyl S-methyl ester |
| U088 | 84-66-2 | 1,2-Benzenedicarboxylic acid, diethyl ester |
| U088 | 84-66-2 | Diethyl phthalate |
| U089 | 56-53-1 | Diethylstilbesterol |
| U089 | 56-53-1 | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- |
| U090 | 94-58-6 | 1,3-Benzodioxole, 5-propyl- |
| U090 | 94-58-6 | Dihydrosafrole |
| U091 | 119-90-4 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- |
| U091 | 119-90-4 | 3,3'-Dimethoxybenzidine |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U092 | 124-40-3 | Dimethylamine (I) |
| U092 | 124-40-3 | Methanamine, -methyl- (I) |
| U093 | 60-11-7 | Benzenamine, N,N-dimethyl-4-(phenylazo)- |
| U093 | 60-11-7 | p-Dimethylaminoazobenzene |
| U094 | 57-97-6 | Benz[a]anthracene, 7,12-dimethyl- |
| U094 | 57-97-6 | 7,12-Dimethylbenz[a]anthracene |
| U095 | 119-93-7 | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- |
| U095 | 119-93-7 | 3,3'-Dimethylbenzidine |
| U096 | 80-15-9 | alpha,alpha-Dimethylbenzylhydroperoxide (R) |
| U096 | 80-15-9 | Hydroperoxide, 1-methyl-1-phenylethyl- (R) |
| U097 | 79-44-7 | Carbamic chloride, dimethyl- |
| U097 | 79-44-7 | Dimethylcarbamoyl chloride |
| U098 | 57-14-7 | 1,1-Dimethylhydrazine |
| U098 | 57-14-7 | Hydrazine, 1,1-dimethyl- |
| U099 | 540-73-8 | 1,2-Dimethylhydrazine |
| U099 | 540-73-8 | Hydrazine, 1,2-dimethyl- |
| U101 | 105-67-9 | 2,4-Dimethylphenol |
| U101 | 105-67-9 | Phenol, 2,4-dimethyl- |
| U102 | 131-11-3 | 1,2-Benzenedicarboxylic acid, dimethyl ester |
| U102 | 131-11-3 | Dimethyl phthalate |
| U103 | 77-78-1 | Dimethyl sulfate |
| U103 | 77-78-1 | Sulfuric acid, dimethyl ester |
| U105 | 121-14-2 | Benzene, 1-methyl-2,4-dinitro- |
| U105 | 121-14-2 | 2,4-Dinitrotoluene |
| U106 | 606-20-2 | Benzene, 2-methyl-1,3-dinitro- |
| U106 | 606-20-2 | 2,6-Dinitrotoluene |
| U107 | 117-84-0 | 1,2-Benzenedicarboxylic acid, dioctyl ester |
| U107 | 117-84-0 | Di-n-octyl phthalate |
| U108 | 123-91-1 | 1,4-Diethyleneoxide |
| U108 | 123-91-1 | 1,4-Dioxane |
| U109 | 122-66-7 | 1,2-Diphenylhydrazine |
| U109 | 122-66-7 | Hydrazine, 1,2-diphenyl- |
| U110 | 142-84-7 | Dipropylamine (I) |
| U110 | 142-84-7 | 1-Propanamine, N-propyl- (I) |
| U111 | 621-64-7 | Di-n-propylnitrosamine |
| U111 | 621-64-7 | 1-Propanamine, N-nitroso-N-propyl- |
| U112 | 141-78-6 | Acetic acidethyl ester (I) |
| U112 | 141-78-6 | Ethyl acetate (I) |
| U113 | 140-88-5 | Ethyl acrylate (I) |
| U113 | 140-88-5 | 2-Propenoic acid, ethyl ester (I) |
| U114 | [1]111-54-6 | Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U114 | [1]111-54-6 | Ethylenebisdithiocarbamic acid, salts & esters |
| U115 | 75-21-8 | Ethylene oxide (I,T) |
| U115 | 75-21-8 | Oxirane (I,T) |
| U116 | 96-45-7 | Ethylenethiourea |
| U116 | 96-45-7 | 2-Imidazolidinethione |
| U117 | 60-29-7 | Ethane, 1,1'-oxybis- (I) |
| U117 | 60-29-7 | Ethyl ether (I) |
| U118 | 97-63-2 | Ethyl methacrylate |
| U118 | 97-63-2 | 2-Propenoic acid, 2-methyl-, ethyl ester |
| U119 | 62-50-0 | Ethyl methanesulfonate |
| U119 | 62-50-0 | Methanesulfonic acid, ethyl ester |
| U120 | 206-44-0 | Fluoranthene |
| U121 | 75-69-4 | Methane, trichlorofluoro- |
| U121 | 75-69-4 | Trichloromonofluoromethane |
| U122 | 50-00-0 | Formaldehyde |
| U123 | 64-18-6 | Formic acid (C,T) |
| U124 | 110-00-9 | Furan (I) |
| U124 | 110-00-9 | Furfuran (I) |
| U125 | 98-01-1 | 2-Furancarboxaldehyde (I) |
| U125 | 98-01-1 | Furfural (I) |
| U126 | 765-34-4 | Glycidylaldehyde |
| U126 | 765-34-4 | Oxiranecarboxyaldehyde |
| U127 | 118-74-1 | Benzene, hexachloro- |
| U127 | 118-74-1 | Hexachlorobenzene |
| U128 | 87-68-3 | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- |
| U128 | 87-68-3 | Hexachlorobutadiene |
| U129 | 58-89-9 | Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- |
| U129 | 58-89-9 | Lindane |
| U130 | 77-47-4 | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- |
| U130 | 77-47-4 | Hexachlorocyclopentadiene |
| U131 | 67-72-1 | Ethane, hexachloro- |
| U131 | 67-72-1 | Hexachloroethane |
| U132 | 70-30-4 | Hexachlorophene |
| U132 | 70-30-4 | Phenol, 2,2'-methylenebis[3,4,6-trichloro- |
| U133 | 302-01-2 | Hydrazine (R,T) |
| U134 | 7664-39-3 | Hydrofluoric acid (C,T) |
| U134 | 7664-39-3 | Hydrogen fluoride (C,T) |
| U135 | 7783-06-4 | Hydrogen sulfide |
| U135 | 7783-06-4 | Hydrogen sulfide $H_2S$ |
| U136 | 75-60-5 | Arsinic acid, dimethyl- |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U136 | 75-60-5 | Cacodylic acid |
| U137 | 193-39-5 | Indeno[1,2,3-cd]pyrene |
| U138 | 74-88-4 | Methane, iodo- |
| U138 | 74-88-4 | Methyl iodide |
| U140 | 78-83-1 | Isobutyl alcohol (I,T) |
| U140 | 78-83-1 | 1-Propanol, 2-methyl- (I,T) |
| U141 | 120-58-1 | 1,3-Benzodioxole, 5-(1-propenyl)- |
| U141 | 120-58-1 | Isosafrole |
| U142 | 143-50-0 | Kepone |
| U142 | 143-50-0 | 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro- |
| U143 | 303-34-4 | 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]]- |
| U143 | 303-34-4 | Lasiocarpine |
| U144 | 301-04-2 | Acetic acid, lead(2+) salt |
| U144 | 301-04-2 | Lead acetate |
| U145 | 7446-27-7 | Lead phosphate |
| U145 | 7446-27-7 | Phosphoric acid, lead(2+) salt (2:3) |
| U146 | 1335-32-6 | Lead, bis(acetato-O)tetrahydroxytri- |
| U146 | 1335-32-6 | Lead subacetate |
| U147 | 108-31-6 | 2,5-Furandione |
| U147 | 108-31-6 | Maleic anhydride |
| U148 | 123-33-1 | Maleic hydrazide |
| U148 | 123-33-1 | 3,6-Pyridazinedione, 1,2-dihydro- |
| U149 | 109-77-3 | Malononitrile |
| U149 | 109-77-3 | Propanedinitrile |
| U150 | 148-82-3 | Melphalan |
| U150 | 148-82-3 | L-Phenylalanine, 4-[bis(2-chloroethyl)amino]- |
| U151 | 7439-97-6 | Mercury |
| U152 | 126-98-7 | Methacrylonitrile (I,T) |
| U152 | 126-98-7 | 2-Propenenitrile, 2-methyl- (I,T) |
| U153 | 74-93-1 | Methanethiol (I,T) |
| U153 | 74-93-1 | Thiomethanol (I,T) |
| U154 | 67-56-1 | Methanol (I) |
| U154 | 67-56-1 | Methyl alcohol (I) |
| U155 | 91-80-5 | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- |
| U155 | 91-80-5 | Methapyrilene |
| U156 | 79-22-1 | Carbonochloridic acid, methyl ester (I,T) |
| U156 | 79-22-1 | Methyl chlorocarbonate (I,T) |
| U157 | 56-49-5 | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- |
| U157 | 56-49-5 | 3-Methylcholanthrene |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U158 | 101-14-4 | Benzenamine, 4,4'-methylenebis[2-chloro- |
| U158 | 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) |
| U159 | 78-93-3 | 2-Butanone (I,T) |
| U159 | 78-93-3 | Methyl ethyl ketone (MEK) (I,T) |
| U160 | 1338-23-4 | 2-Butanone, peroxide (R,T) |
| U160 | 1338-23-4 | Methyl ethyl ketone peroxide (R,T) |
| U161 | 108-10-1 | Methyl isobutyl ketone (I) |
| U161 | 108-10-1 | 4-Methyl-2-pentanone (I) |
| U161 | 108-10-1 | Pentanol, 4-methyl- |
| U162 | 80-62-6 | Methyl methacrylate (I,T) |
| U162 | 80-62-6 | 2-Propenoic acid, 2-methyl-, methyl ester (I,T) |
| U163 | 70-25-7 | Guanidine, N-methyl-N'-nitro-N-nitroso- |
| U163 | 70-25-7 | MNNG |
| U164 | 56-04-2 | Methylthiouracil |
| U164 | 56-04-2 | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- |
| U165 | 91-20-3 | Naphthalene |
| U166 | 130-15-4 | 1,4-Naphthalenedione |
| U166 | 130-15-4 | 1,4-Naphthoquinone |
| U167 | 134-32-7 | 1-Naphthalenamine |
| U167 | 134-32-7 | alpha-Naphthylamine |
| U168 | 91-59-8 | 2-Naphthalenamine |
| U168 | 91-59-8 | beta-Naphthylamine |
| U169 | 98-95-3 | Benzene, nitro- |
| U169 | 98-95-3 | Nitrobenzene (I,T) |
| U170 | 100-02-7 | p-Nitrophenol |
| U170 | 100-02-7 | Phenol, 4-nitro- |
| U171 | 79-46-9 | 2-Nitropropane (I,T) |
| U171 | 79-46-9 | Propane, 2-nitro- (I,T) |
| U172 | 924-16-3 | 1-Butanamine, N-butyl-N-nitroso- |
| U172 | 924-16-3 | N-Nitrosodi-n-butylamine |
| U173 | 1116-54-7 | Ethanol, 2,2'-(nitrosoimino)bis- |
| U173 | 1116-54-7 | N-Nitrosodiethanolamine |
| U174 | 55-18-5 | Ethanamine, N-ethyl-N-nitroso- |
| U174 | 55-18-5 | N-Nitrosodiethylamine |
| U176 | 759-73-9 | N-Nitroso-N-ethylurea |
| U176 | 759-73-9 | Urea, N-ethyl-N-nitroso- |
| U177 | 684-93-5 | N-Nitroso-N-methylurea |
| U177 | 684-93-5 | Urea, N-methyl-N-nitroso- |
| U178 | 615-53-2 | Carbamic acid, methylnitroso-, ethyl ester |
| U178 | 615-53-2 | N-Nitroso-N-methylurethane |
| U179 | 100-75-4 | N-Nitrosopiperidine |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U179 | 100-75-4 | Piperidine, 1-nitroso- |
| U180 | 930-55-2 | N-Nitrosopyrrolidine |
| U180 | 930-55-2 | Pyrrolidine, 1-nitroso- |
| U181 | 99-55-8 | Benzenamine, 2-methyl-5-nitro- |
| U181 | 99-55-8 | 5-Nitro-O-toluidine |
| U182 | 123-63-7 | 1,3,5-Trioxane, 2,4,6-trimethyl- |
| U182 | 123-63-7 | Paraldehyde |
| U183 | 608-93-5 | Benzene, pentachloro- |
| U183 | 608-93-5 | Pentachlorobenzene |
| U184 | 76-01-7 | Ethane, pentachloro- |
| U184 | 76-01-7 | Pentachloroethane |
| U185 | 82-68-8 | Benzene, pentachloronitro- |
| U185 | 82-68-8 | Pentachloronitrobenzene (PCNB) |
| U186 | 504-60-9 | 1-Methylbutadiene (I) |
| U186 | 504-60-9 | 1,3-Pentadiene (I) |
| U187 | 62-44-2 | Acetamide, N-(4-ethoxyphenyl)- |
| U187 | 62-44-2 | Phenacetin |
| U188 | 108-95-2 | Phenol |
| U189 | 1314-80-3 | Phosphorus sulfide (R) |
| U189 | 1314-80-3 | Sulfur phosphide (R) |
| U190 | 85-44-9 | 1,3-Isobenzofurandione |
| U190 | 85-44-9 | Phthalic anhydride |
| U191 | 109-06-8 | 2-Picoline |
| U191 | 109-06-8 | Pyridine, 2-methyl- |
| U192 | 23950-58-5 | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- |
| U192 | 23950-58-5 | Pronamide |
| U193 | 1120-71-4 | 1,2-Oxathiolane, 2,2-dioxide |
| U193 | 1120-71-4 | 1,3-Propane sultone |
| U194 | 107-10-8 | 1-Propanamine (I,T) |
| U194 | 107-10-8 | n-Propylamine (I,T) |
| U196 | 110-86-1 | Pyridine |
| U197 | 106-51-4 | p-Benzoquinone |
| U197 | 106-51-4 | 2,5-Cyclohexadiene-1,4-dione |
| U200 | 50-55-5 | Reserpine |
| U200 | 50-55-5 | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)- |
| U201 | 108-46-3 | 1,3-Benzenediol |
| U201 | 108-46-3 | Resorcinol |
| U203 | 94-59-7 | 1,3-Benzodioxole, 5-(2-propenyl)- |
| U203 | 94-59-7 | Safrole |
| U204 | 7783-00-8 | Selenious acid |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U204 | 7783-00-8 | Selenium dioxide |
| U205 | 7488-56-4 | Selenium sulfide |
| U205 | 7488-56-4 | Selenium sulfide $SeS_2$ (R,T) |
| U206 | 18883-66-4 | Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D- |
| U206 | 18883-66-4 | D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)carbonyl]amino]- |
| U206 | 18883-66-4 | Streptozotocin |
| U207 | 95-94-3 | Benzene, 1,2,4,5-tetrachloro- |
| U207 | 95-94-3 | 1,2,4,5-Tetrachlorobenzene |
| U208 | 630-20-6 | Ethane, 1,1,1,2-tetrachloro- |
| U208 | 630-20-6 | 1,1,1,2-Tetrachloroethane |
| U209 | 79-34-5 | Ethane, 1,1,2,2-tetrachloro- |
| U209 | 79-34-5 | 1,1,2,2-Tetrachloroethane |
| U210 | 127-18-4 | Ethene, tetrachloro- |
| U210 | 127-18-4 | Tetrachloroethylene |
| U211 | 56-23-5 | Carbon tetrachloride |
| U211 | 56-23-5 | Methane, tetrachloro- |
| U213 | 109-99-9 | Furan, tetrahydro- (I) |
| U213 | 109-99-9 | Tetrahydrofuran (I) |
| U214 | 563-68-8 | Acetic acid, thallium(1+) salt |
| U214 | 563-68-8 | Thallium(I) acetate |
| U215 | 6533-73-9 | Carbonic acid, dithallium(1+) salt |
| U215 | 6533-73-9 | Thallium(I) carbonate |
| U216 | 7791-12-0 | Thallium(I) chloride |
| U216 | 7791-12-0 | Thallium chloride TlCl |
| U217 | 10102-45-1 | Nitric acid, thallium(1+) salt |
| U217 | 10102-45-1 | Thallium(I) nitrate |
| U218 | 62-55-5 | Ethanethioamide |
| U218 | 62-55-5 | Thioacetamide |
| U219 | 62-56-6 | Thiourea |
| U220 | 108-88-3 | Benzene, methyl- |
| U220 | 108-88-3 | Toluene |
| U221 | 25376-45-8 | Benzenediamine, ar-methyl- |
| U221 | 25376-45-8 | Toluenediamine |
| U222 | 636-21-5 | Benzenamine, 2-methyl-, hydrochloride |
| U222 | 636-21-5 | o-Toluidine hydrochloride |
| U223 | 26471-62-5 | Benzene, 1,3-diisocyanatomethyl- (R,T) |
| U223 | 26471-62-5 | Toluene diisocyanate (R,T) |
| U225 | 75-25-2 | Bromoform |
| U225 | 75-25-2 | Methane, tribromo- |
| U226 | 71-55-6 | Ethane, 1,1,1-trichloro- |
| U226 | 71-55-6 | Methyl chloroform |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U226 | 71-55-6 | 1,1,1-Trichloroethane |
| U227 | 79-00-5 | Ethane, 1,1,2-trichloro- |
| U227 | 79-00-5 | 1,1,2-Trichloroethane |
| U228 | 79-01-6 | Ethene, trichloro- |
| U228 | 79-01-6 | Trichloroethylene |
| U234 | 99-35-4 | Benzene, 1,3,5-trinitro- |
| U234 | 99-35-4 | 1,3,5-Trinitrobenzene (R,T) |
| U235 | 126-72-7 | 1-Propanol, 2,3-dibromo-, phosphate (3:1) |
| U235 | 126-72-7 | Tris(2,3-dibromopropyl) phosphate |
| U236 | 72-57-1 | 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy]-, tetrasodium salt |
| U236 | 72-57-1 | Trypan blue |
| U237 | 66-75-1 | 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]- |
| U237 | 66-75-1 | Uracil mustard |
| U238 | 51-79-6 | Carbamic acid, ethyl ester |
| U238 | 51-79-6 | Ethyl carbamate (urethane) |
| U239 | 1330-20-7 | Benzene, dimethyl- (I,T) |
| U239 | 1330-20-7 | Xylene (I) |
| U240 | [1]94-75-7 | Acetic acid, (2,4-dichlorophenoxy)-, salts & esters |
| U240 | [1]94-75-7 | 2,4-D, salts & esters |
| U243 | 1888-71-7 | Hexachloropropene |
| U243 | 1888-71-7 | 1-Propene, 1,1,2,3,3,3-hexachloro- |
| U244 | 137-26-8 | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- |
| U244 | 137-26-8 | Thiram |
| U246 | 506-68-3 | Cyanogen bromide (CN)Br |
| U247 | 72-43-5 | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- |
| U247 | 72-43-5 | Methoxychlor |
| U248 | [1]81-81-2 | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl butyl)-, & salts, when present at concentrations of 0.3% or less |
| U248 | [1]81-81-2 | Warfarin, & salts, when present at concentrations of 0.3% or less |
| U249 | 1314-84-7 | Zinc phosphide$Zn_3P_2$, when present at concentrations of 10% or less |
| U271 | 17804-35-2 | Benomyl |
| U271 | 17804-35-2 | Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester |
| U278 | 22781-23-3 | Bendiocarb |
| U278 | 22781-23-3 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methylcarbamate |
| U279 | 63-25-2 | Carbaryl |
| U279 | 63-25-2 | 1-Naphthalenol, methylcarbamate |
| U280 | 101-27-9 | Barban |
| U280 | 101-27-9 | Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester |
| U328 | 95-53-4 | Benzenamine, 2-methyl- |
| U328 | 95-53-4 | o-Toluidine |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|
| U353 | 106-49-0 | Benzenamine, 4-methyl- |
| U353 | 106-49-0 | p-Toluidine |
| U359 | 110-80-5 | Ethanol, 2-ethoxy- |
| U359 | 110-80-5 | Ethylene glycol monoethyl ether |
| U364 | 22961-82-6 | Bendiocarb phenol |
| U364 | 22961-82-6 | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- |
| U367 | 1563-38-8 | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- |
| U367 | 1563-38-8 | Carbofuran phenol |
| U372 | 10605-21-7 | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester |
| U372 | 10605-21-7 | Carbendazim |
| U373 | 122-42-9 | Carbamic acid, phenyl-, 1-methylethyl ester |
| U373 | 122-42-9 | Propham |
| U387 | 52888-80-9 | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester |
| U387 | 52888-80-9 | Prosulfocarb |
| U389 | 2303-17-5 | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester |
| U389 | 2303-17-5 | Triallate |
| U394 | 30558-43-1 | A2213 |
| U394 | 30558-43-1 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester |
| U395 | 5952-26-1 | Diethylene glycol, dicarbamate |
| U395 | 5952-26-1 | Ethanol, 2,2'-oxybis-, dicarbamate |
| U404 | 121-44-8 | Ethanamine, N,N-diethyl- |
| U404 | 121-44-8 | Triethylamine |
| U409 | 23564-05-8 | Carbamic acid, [1,2-phenylenebis(Iminocarbonothioyl)]bis-, dimethyl ester |
| U409 | 23564-05-8 | Thiophanate-methyl |
| U410 | 59669-26-0 | Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester |
| U410 | 59669-26-0 | Thiodicarb |
| U411 | 114-26-1 | Phenol, 2-(1-methylethoxy)-, methylcarbamate |
| U411 | 114-26-1 | Propoxur |
| See F027 | 93-76-5 | Acetic acid, (2,4,5-trichlorophenoxy)- |
| See F027 | 87-86-5 | Pentachlorophenol |
| See F027 | 87-86-5 | Phenol, pentachloro- |
| See F027 | 58-90-2 | Phenol, 2,3,4,6-tetrachloro- |
| See F027 | 95-95-4 | Phenol, 2,4,5-trichloro- |
| See F027 | 88-06-2 | Phenol, 2,4,6-trichloro- |
| See F027 | 93-72-1 | Propanoic acid, 2-(2,4,5-trichlorophenoxy)- |
| See F027 | 93-72-1 | Silvex (2,4,5-TP) |
| See F027 | 93-76-5 | 2,4,5-T |
| See F027 | 58-90-2 | 2,3,4,6-Tetrachlorophenol |
| See F027 | 95-95-4 | 2,4,5-Trichlorophenol |
| See F027 | 88-06-2 | 2,4,6-Trichlorophenol |

| Hazardous Waste No. | Chemical Abstracts No. | Substance |
|---|---|---|

[1]CAS number given for parent compound only.

**History:** Effective January 1, 2019; amended effective July, 1, 2020; July 1, 2021.
**General Authority:** NDCC 23.1-04-03
**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 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; and

         (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 1,000 grams IS spiking level of 1 parts per trillion, final extraction volume of 10-50 microliter. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 must be submitted electronically using the environmental protection agency's waste import export tracking system, or its successor system.

(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.

(5) The export of cathode ray tubes is prohibited unless all of the following occur:

(a) The receiving country consents to the intended export. When the receiving country consents in writing to the receipt of the cathode ray tubes, 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, environmental protection agency will notify the exporter in writing. The environmental protection agency will also notify the exporter of any responses from transit countries.

(b) On or after the automated export system filing compliance date, the exporter or a United States authorized agent shall submit electronic export information for each shipment to the automated export system or its successor system, under the international trade data system platform in accordance with 15 CFR 30.4(b).

(c) The following items must be included with the electronic export information, along with the information required under 15 CFR 30.6:

[1] Environmental protection agency license code;

[2] Commodity classification code per 15 CFR 30.6(a)(12);

[3] Environmental protection agency consent number;

[4] Country of ultimate destination per 15 CFR 30.6(a)(5);

[5] Date of export per 15 CFR 30.6(a)(2);

[6] Quantity of waste in shipment and units for reported quantity, if required reporting units established by value for the reported commodity classification number are in units of weight or volume per 15 CFR 30.6(a)(15); or

[7] Environmental protection agency net quantity reported in units of kilograms, if required reporting units established by value for the reported commodity classification number are not in units of weight or volume.

(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 shall keep copies of notifications and acknowledgments of consent to export cathode ray tubes for a period of three years following receipt of the acknowledgment. Exporters may satisfy this recordkeeping requirement by retaining electronically submitted notifications or electronically generated acknowledgments in the cathode ray tube exporter's account on the environmental protection agency's waste import export tracking system, or its successor system, provided that such

copies are readily available for viewing and production if requested by any environmental protection agency or authorized state inspector. No cathode ray tubes exporter may be held liable for the inability to produce a notification or acknowledgment for inspection under this section if the cathode ray tube exporter can demonstrate that the inability to produce such copies are due exclusively to technical difficulty with environmental protection agency's waste import export tracking system, or its successor system for which the cathode ray tube exporter bears no responsibility.

(10) Prior to one year after the automated export system filing compliance date, annual reports must be sent to the following mailing address:

Office of Land and Emergency Management,
Office of Resource Conservation and Recovery,
Materials Recovery and Waste Management Division,
International Branch (Mail Code 2255A),
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460.

Hand-delivered annual reports on used cathode ray tubes exported during 2016 should be sent to:

Office of Land and Emergency Management,
Office of Resource Conservation and Recovery,
Materials Recovery and Waste Management Division,
International Branch (Mail Code 2255A),
Environmental Protection Agency
William Jefferson Clinton South Building, Room 6144
1200 Pennsylvania Ave. NW
Washington, DC 20004.

Subsequently, annual reports must be submitted to the office listed. Exporters shall keep copies of each annual report for a period of at least three years from the due date of the report. Exporters may satisfy this recordkeeping requirement by retaining electronically submitted annual reports in the cathode ray tube exporter's account on environmental protection agency's waste import export tracking system, or its successor system, provided that a copy is readily available for viewing and production if requested by any environmental protection agency or authorized state inspector. No cathode ray tube exporter may be held liable for the inability to produce an annual report for inspection under this section if the cathode ray tube exporter can demonstrate that the inability to produce the annual report is due exclusively to technical difficulty with environmental protection agency's waste import export tracking system, or its successor system for which the cathode ray tube exporter bears no responsibility.

(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 January 1, 2019; amended effective July 1, 2020.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 Land and Emergency Management
Office of Resource Conservation and Recovery
Materials Recovery and Waste Management Division
International branch (Mail Code 2255A)
Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460.

Hand-delivered notifications should be sent to:

Office of Land and Emergency Management
Office of Resource Conservation and Recovery
Materials Recovery and Waste Management Division
International Branch (Mail Code 2255A)
Environmental Protection Agency
William Jefferson Clinton South 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 January 1, 2019; amended effective July 1, 2020.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 An 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 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 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's 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 subdivision 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 subdivision 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 year-end 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 subdivisions 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 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 33.1-24-02-42 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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-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.]

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.]

| **Alternative I** |
|---|

| | |
|---|---|
| 1. | Sum of current cost estimate (total of all costs estimates shown in the nine paragraphs above). $_____ |
| *2. | 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). $_____ |
| *3. | Tangible net worth. $_____ |
| *4. | Net worth. $_____ |
| *5. | Current assets. $_____ |
| *6. | Current liabilities. $_____ |
| 7. | Net working capital (line 5 minus line 6). $_____ |
| *8. | The sum of net income plus depreciation, depletion, and amortization. $_____ |
| *9. | Total assets in the United States (required only if less than 90% of firm's assets are located in the United States). $_____ |
| Yes | |
| No | |
| 10. | Is line 3 at least $10 million? |
| 11. | Is line 3 at least 6 times line 1? |
| 12. | Is line 7 at least 6 times line 1? |
| *13. | Are at least 90% of firm's assets located in the United States? If not, complete line 14. |
| 14. | Is line 9 at least 6 times line 1? |
| 15. | Is line 2 divided by line 4 less than 2.0? |
| 16. | Is line 8 divided by line 2 greater than 0.1? |
| 17. | Is line 5 divided by line 6 greater than 1.5? |
| | **Alternative II** |
| 1. | Sum of current cost estimates (total of all cost estimates shown in the nine 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 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). $_____ |
| Yes | |
| No | |
| 7. | Is line 5 at least $10 million? |
| 8. | Is line 5 at least 6 times line 1? |
| *9. | Are at least 90% of firm's assets located in the United States? If not, complete line 10. |

| | |
|---|---|
| 10. | Is line 6 at least 6 times line 1? |

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 section 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. $_____ |
| Yes | |
| No | |
| 7. | Is line 5 at least $10 million? |
| 8. | Is line 4 at least 6 times line 1? |
| 9. | Is line 5 at last 6 times line 1? |
| *10. | Are at least 90% of assets located in the United States? |

| | |
|---|---|
| | If not, complete line 11. |
| 11. | Is line 6 at least 6 times line 1? |
| | **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). $_____ |
| Yes | |
| No | |
| 7. | Is line 5 at least $10 million? |
| 8. | Is line 5 at least 6 times line 1? |
| 9. | Are at least 90% of assets located in the United States?<br>If not, complete line 10. |
| 10. | Is line 6 at least 6 times line 1? |

[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.]

| | |
|---|---|
| | **Alternative I** |
| 1. | Sum of current 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. | The sum of net income plus depreciation, depletion, and amortization. $_____ |
| *11. | Total assets in United States (required only if less than 90% of assets are located in the United States). $_____ |
| Yes | |
| No | |
| 12. | Is line 5 at least $10 million? |
| 13. | Is line 5 at least 6 times line 3? |
| 14. | Is line 9 at least 6 times line 3? |
| *15. | Are at least 90% of assets located in the United States?<br>If not, complete line 16. |
| 16. | Is line 11 at least 6 times line 3? |
| 17. | Is line 4 divided by line 6 less than 2.0? |
| 18. | Is line 10 divided by line 4 greater than 0.1? |
| 19. | Is line 7 divided by line 8 greater than 1.5? |
| | **Alternative II** |
| 1. | Sum of current cost estimate (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. | Current bond rating of most recent issuance and name of rating service. |
| *5. | Date of issuance of bond. |
| *6. | Date of maturity of bond. |
| *7. | 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). $_____ |
| *8. | Total assets in the United States (required only if less than 90% of assets are located in the United States). $_____ |
| Yes | |
| No | |
| 9. | Is line 7 at least $10 million? |
| 10. | Is line 7 at least 6 times line 3? |
| *11. | Are at least 90% of assets located in the United States?<br>If not, complete line 12. |
| 12. | Is line 8 at least 6 times line 3? |

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's 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]; or

      (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, 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's 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]; or

(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:

| | Sudden Accidental Occurrences | Nonsudden Accidental Occurrences |
|---|---|---|
| Penal sum per occurrence | [insert amount] | [insert amount] |
| Annual aggregate | [insert amount] | [insert amount] |

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, 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]; or

(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]; or

(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. 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. 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]; or

(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 depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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. Conditions 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 [50 feet] from the facility's property line.

**History:** Effective January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 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 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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: 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 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 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. 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.

**History:** Effective January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 onsite.

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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 nonsudden 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 runoffs 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.

7. Personnel training. All employees must be thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.

**History:** Effective January 1, 2019; amended effective July 1, 2020.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 North Dakota Century Code chapter 23.1-04 and 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 megajoules 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 megajoules 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 [60 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 [60 feet per second] but less than one hundred twenty-two meters per second [400 feet per second] is allowed if the net heating value of the gas being combusted is greater than thirty seven and three-tenths megajoules 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 [400 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, $1.74 \times 10^{-7}$ (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:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

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 indicate 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;

(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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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/$m^3$ (@ 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/$m^3$ (@ 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 A 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;

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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 onsite:

   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 onsite 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 onsite 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 North Dakota Century Code chapter 23.1-04 and 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.

**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 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 33.1-24-02-182, 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 of 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 North Dakota Century Code chapter 23.1-04 and 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 $1.8x10^{-6}$ atmospheres/gram-mole/meter$^3$] at twenty-five degrees Celsius must be included.

**History:** Effective January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 teats 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 one 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 $1.8x10^{-6}$ atmospheres/gram-mole/meters$^3$] 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 $1.8x10^{-6}$ atmospheres/gram-mole/meters$^3$] 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:

$$\bar{C} = \frac{1}{Q_T} X \sum_{i=1}^{n} (Q_i x C_i)$$

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-liquid-phase (0.1 Y/X) [which can also be expressed as $1.8x10^{-6}$ atmospheres/gram-mole/$meter^3$] 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 one of the following appropriate 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 meters$^3$ (5,330 feet$^3$), 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 meters$^3$ (2,650 feet$^3$) but less than one hundred fifty-one meters$^3$ (5,330 feet$^3$), 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 meters$^3$ (2,650 feet$^3$), 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 treat 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 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 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 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 33.1-24-02-201, 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 meters$^3$ (3.5 feet$^3$) and less than or equal to forty-six one-hundredths meters$^3$ (16.25 feet$^3$), 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 meters$^3$ (16.25 feet$^3$) 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 meters$^3$ (16.25 feet$^3$) 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 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 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 meters$^3$ (16.25 feet$^3$) 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 two and five-tenths 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 that 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 must meet the following requirements:

   a. The closed-vent system must 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 must 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 must 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 must 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 must 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, a car-seal or a lock-and-key configuration valve. The remanufacturer or other person that stores or treats the hazardous secondary material visually shall 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 must 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 must meet the following requirements:

   a. The control device must 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, must 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 must 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 must 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; or

(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 must 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, the disagreement must 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 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 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 must be inspected at least once each operating day to check control device operation. Any necessary corrective measures must be implemented immediately to ensure the control device is operated in compliance with the requirements of this section.

**History:** Effective January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1
**Law Implemented:** NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

**33.1-24-02-208. 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 2017, ch. 199, § 1
**Law Implemented:** NDCC 23.1-04-03, 23.1-04-05; S.L. 2017, ch. 199, § 19

**33.1-24-02-209. 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) Remanufacturers 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 the 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 January 1, 2019.
**General Authority:** NDCC 23.1-04-03; S.L. 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 | Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons. |
| F002 | Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane. |
| F003 | N.A. |
| F004 | Cresols and cresylic acid, nitrobenzene. |
| F005 | Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane. |
| F006 | Cadmium, hexavalent chromium, nickel, cyanide (complexed). |
| F007 | Cyanide (salts). |
| F008 | Cyanide (salts). |
| F009 | Cyanide (salts). |
| F010 | Cyanide (salts). |
| F011 | Cyanide (salts). |
| F012 | Cyanide (complexed). |
| F019 | Hexavalent chromium, cyanide (complexed). |
| F020 | Tetra- and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodi-benzofurans; tri- and tetrachloro-phenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |
| F021 | Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives. |
| F022 | Tetra-, penta, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans. |
| F023 | Tetra, and pentachlorodibenzo-p-dioxins; tetra-, and pentachlorodibenzofurans; tri- and tetra-chlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts. |
| F024 | 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. |
| F025 | 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. |
| F026 | Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans. |
| F027 | 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. |
| F028 | 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. |
| F032 | 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. |
| F034 | Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium. |
| F035 | Arsenic, chromium, lead. |
| F037 | Benzene, benzo(a)pyrene, chrysene, lead, chromium. |

| EPA Hazardous Waste No. | Hazardous Waste Constituents for Which Listed |
|---|---|
| F038 | Benzene, benzo(a)pyrene, chrysene, lead, chromium. |
| F039 | All constituents for which treatment standards are specified for multisource leachate (wastewaters and nonwastewaters) under section 33.1-24-05-283, Table CCW. |
| K001 | 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. |
| K002 | Hexavalent chromium, lead. |
| K003 | Hexavalent chromium, lead. |
| K004 | Hexavalent chromium. |
| K005 | Hexavalent chromium, lead. |
| K006 | Hexavalent chromium. |
| K007 | Cyanide (complexed), hexavalent chromium. |
| K008 | Hexavalent chromium. |
| K009 | Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid. |
| K010 | Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde. |
| K011 | Acrylonitrile, acetonitrile, hydrocyanic acid. |
| K013 | Hydrocyanic acid, acrylonitrile, acetonitrile. |
| K014 | Acetonitrile, acrylamide. |
| K015 | Benzyl chloride, chlorobenzene, toluene, benzotrichloride. |
| K016 | Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene. |
| K017 | Epichlorohydrin, chloroethers [bis(chloromethyl)ether and bis(2-chloroethyl)ether], trichloropropane, dichloropropanols. |
| K018 | 1,2-Dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene. |
| K019 | 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. |
| K020 | 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. |
| K021 | Antimony, carbon tetrachloride, chloroform. |
| K022 | Phenol, tars (polycyclic aromatic hydrocarbons). |
| K023 | Phthalic anhydride, maleic anhydride. |
| K024 | Phthalic anhydride, 1,4-naphthoquinone. |
| K025 | Meta-dinitrobenzene, 2,4-dinitrotoluene. |
| K026 | Paraldehyde, pyridines, 2-picoline. |
| K027 | Toluene diisocyanate, toluene-2,4-diamine. |
| K028 | 1,1,1-Trichloroethane, vinyl chloride. |
| K029 | 1,2-Dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform. |
| K030 | Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride. |
| K031 | Arsenic. |
| K032 | Hexachlorocyclopentadiene. |
| K033 | Hexachlorocyclopentadiene. |
| K034 | Hexachlorocyclopentadiene. |
| K035 | Creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene dibenzo(a)anthracene, acenaphthalene. |

| EPA Hazardous Waste No. | Hazardous Waste Constituents for Which Listed |
|---|---|
| K036 | Toluene, phosphorodithioic and phosphorothioic acid esters. |
| K037 | Toluene, phosphorodithioic and phosphorothioic acid esters. |
| K038 | Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters. |
| K039 | Phosphorodithioic and phosphorothioic acid esters. |
| K040 | Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters. |
| K041 | Toxaphene. |
| K042 | Hexachlorobenzene, ortho-dichlorobenzene. |
| K043 | 2,4-Dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol. |
| K044 | N.A. |
| K045 | N.A. |
| K046 | Lead. |
| K047 | N.A. |
| K048 | Hexavalent chromium, lead. |
| K049 | Hexavalent chromium, lead. |
| K050 | Hexavalent chromium. |
| K051 | Hexavalent chromium, lead. |
| K052 | Lead. |
| K060 | Cyanide, naphthalene, phenolic compounds, arsenic. |
| K061 | Hexavalent chromium, lead, cadmium. |
| K062 | Hexavalent chromium, lead. |
| K069 | Hexavalent chromium, lead, cadmium. |
| K071 | Mercury. |
| K073 | Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane. |
| K083 | Aniline, diphenylamine, nitrobenzene, phenylenediamine. |
| K084 | Arsenic. |
| K085 | Benzene, dichlorobenzenes, trichlorbenzenes, tetrachloroenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride. |
| K086 | Lead, hexavalent chromium. |
| K087 | Phenol, naphthalene. |
| K088 | Cyanide (complexes). |
| K093 | Phthalic anhydride, maleic anhydride. |
| K094 | Phthalic anhydride. |
| K095 | 1,1,2-Trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane. |
| K096 | 1,2-Dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane. |
| K097 | Chlordane, heptachlor. |
| K098 | Toxaphene. |
| K099 | 2,4-Dichlorophenol, 2,4,6-trichlorophenol. |
| K100 | Hexavalent chromium, lead, cadmium. |
| K101 | Arsenic. |
| K102 | Arsenic. |
| K103 | Aniline, nitrobenzene, phenylenediamine. |
| K104 | Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine. |
| K105 | Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol. |

| EPA Hazardous Waste No. | Hazardous Waste Constituents for Which Listed |
|---|---|
| K106 | Mercury. |
| K107 | 1,1-Dimethylhydrazine (UDMH). |
| K108 | 1,1-Dimethylhydrazine (UDMH). |
| K109 | 1,1-Dimethylhydrazine (UDMH). |
| K110 | 1,1-Dimethylhydrazine (UDMH). |
| K111 | 2,4-Dinitrotoluene. |
| K112 | 2,4-Toluenediamine, o-toluidine, p-toluidine, aniline. |
| K113 | 2,4-Toluenediamine, o-toluidine, p-toluidine, aniline. |
| K114 | 2,4-Toluenediamine, o-toluidine, p-toluidine. |
| K115 | 2,4-Toluenediamine. |
| K116 | Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene. |
| K117 | Ethylene dibromide. |
| K118 | Ethylene dibromide. |
| K123 | Ethylene thiourea. |
| K124 | Ethylene thiourea. |
| K125 | Ethylene thiourea. |
| K126 | Ethylene thiourea. |
| K131 | Dimethyl sulfate, methyl bromide. |
| K132 | Methyl bromide. |
| K136 | Ethylene dibromide. |
| K141 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K142 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K143 | Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene. |
| K144 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene. |
| K145 | Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene. |
| K147 | Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K148 | Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. |
| K149 | Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene. |
| K150 | Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene. |
| K151 | Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene. |
| K156 | Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine. |
| K157 | Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine. |
| K158 | Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride. |
| K159 | Benzene, butylate, EPTC, molinate, pebulate, vernolate. |
| K161 | Antimony, arsenic, metam-sodium, ziram. |
| K169 | Benzene. |
| K170 | Benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, 3-methylcholanthrene, 7,12-dimethylbenz(a)anthracene. |

| EPA Hazardous Waste No. | Hazardous Waste Constituents for Which Listed |
|---|---|
| K171 | Benzene, arsenic. |
| K172 | Benzene, arsenic. |
| 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 | Mercury. |
| K176 | Arsenic, lead. |
| K177 | Antimony. |
| K178 | Thallium. |
| K181 | Aniline, o-anisidine, 4-chloroaniline, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine. |

**N.A. - Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.**

# APPENDIX V

## Hazardous Constituents

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| A2213 | Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester | 30558-43-1 | U394 |
| Acetonitrile | Same | 75-05-8 | U003 |
| Acetophenone | Ethanone, 1-phenyl- | 98-86-2 | U004 |
| 2-Acetylaminefluarone | Acetamide, N-9H-fluoren-2-yl- | 53-96-3 | U005 |
| Acetyl chloride | Same | 75-36-5 | U006 |
| 1-Acetyl-2-thiourea | Acetamide, N-(aminothioxomethyl)- | 591-08-2 | P002 |
| Acrolein | 2-Propenal | 107-02-08 | P003 |
| Acrylamide | 2-Propenamide | 79-06-1 | U007 |
| Acrylonitrile | 2-Propenenitrile | 107-13-1 | U009 |
| Aflatoxins | Same | 1402-68-2 | |
| Aldicarb | Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime | 116-06-3 | P070 |
| Aldicarb sulfone | Propanal, 2-methyl-2-(methylsulfonyl)-, O-[(methylamino) carbonyl] oxime | 1646-88-4 | P203 |
| Aldrin | 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- | 309-00-2 | P004 |
| Allyl alcohol | 2-Propen-1-ol | 107-18-6 | P005 |
| Allyl chloride | 1-Propene, 3-chloro | 107-05-1 | |
| Aluminum phosphide | Same | 20859-73-8 | P006 |
| 4-Aminobiphenyl | [1,1'-Biphenyl]-4-amine | 92-67-1 | |
| 5-(Aminomethyl)-3-isoxazolol | 3(2H)-Isoxazolone, 5-(aminomethyl)- | 2763-96-4 | P007 |
| 4-Aminopyridine | 4-Pyridinamine | 504-24-5 | P008 |
| Amitrole | 1H-1,2,4-Triazol-3-amine | 61-82-5 | U011 |
| Ammonium vanadate | Vanadic acid, ammonium salt | 7803-55-6 | P119 |
| Aniline | Benzenamine | 62-53-3 | U012 |
| o-Anisidine (2-methoxyaniline) | Benzenamine, 2-methoxy- | 90-04-0 | |
| Antimony | Same | 7440-36-0 | |
| Antimony compounds, N.O.S.[1] | | | |
| Aramite | Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester | 140-57-8 | |
| Arsenic | Same | 7440-38-2 | |
| Arsenic compounds, N.O.S.[1] | | | |
| Arsenic acid | Arsenic acid $H_3AsO_4$ | 7778-39-4 | P010 |
| Arsenic pentoxide | Arsenic oxide $As_2O_5$ | 1303-28-2 | P011 |
| Arsenic trioxide | Arsenic oxide $As_2O_3$ | 1327-53-3 | P012 |
| Auramine | Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl | 492-80-8 | U014 |
| Azaserine | L-Serine, diazoacetate (ester) | 115-02-6 | U015 |
| Barban | Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester | 101-27-9 | U280 |
| Barium | Same | 7440-39-3 | |
| Barium compounds, N.O.S.[1] | | | |
| Barium cyanide | Same | 542-62-1 | P013 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Bendiocarb | 1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methylcarbamate | 22781-23-3 | U278 |
| Bendiocarb pheonol | 1,3-Benzodioxol-4-ol, 2,2-dimethyl- | 22961-82-6 | U364 |
| Benomyl | Carbamic acid, [1-[(butylamino) carbonyl]-1H-benzimidazol-2-yl]-, methyl ester | 17804-35-2 | U271 |
| Benz[c]acridine | Same | 225-51-4 | U016 |
| Benz[a]anthracene | Same | 56-55-3 | U018 |
| Benzalchloride | Benzene, (dichloromethyl)- | 98-87-3 | U017 |
| Benzene | Same | 71-43-2 | U019 |
| Benzenearsonic acid | Arsonic acid, phenyl- | 98-05-5 | |
| Benzidine | [1,1'-Biphenyl]-4,4'-diamine | 92-87-5 | U021 |
| Benzo[b]fluoranthene | Benz[e]acephenanthrylene | 205-99-2 | |
| Benzo[j]fluoranthene | Same | 205-82-3 | |
| Benzo[k]fluoranthene | Same | 207-08-9 | |
| Benzo[a]pyrene | Same | 50-32-8 | U022 |
| p-Benzoquinone | 2,5-Cyclohexadiene-1,4-dione | 106-51-4 | U197 |
| Benzotrichloride | Benzene, (trichloromethyl)- | 98-07-7 | U023 |
| Benzyl chloride | Benzene, (chloromethyl)- | 100-44-7 | P028 |
| Beryllium powder | Same | 7440-41-7 | P015 |
| Beryllium compounds, N.O.S.[1] | | | |
| Bis (pentamethylene)-thiuram tetrasulfide | Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis- | 120-54-7 | |
| Bromoacetone | 2-Propanone, 1-bromo- | 598-31-2 | P017 |
| Bromoform | Methane, tribromo- | 75-25-2 | U225 |
| 4-Bromophenyl phenyl ether | Benzene, 1-bromo-4-phenoxy- | 101-55-3 | U030 |
| Brucine | Strychnidin-10-one, 2,3-dimethoxy- | 357-57-3 | P018 |
| Butyl benzyl phthalate | 1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester | 85-68-7 | |
| Butylate | Carbamothioic acid, bis (2-methylpropyl)-,S-ethyl ester | 2008-41-5 | |
| Cacodylic acid | Arsinic acid, dimethyl- | 75-60-5 | U136 |
| Cadmium | Same | 7440-43-9 | |
| Cadmium compounds, N.O.S.[1] | | | |
| Calcium chromate | Chromic acid $H_2CrO_4$, calcium salt | 13765-19-0 | U032 |
| Calcium cyanide | Calcium cyanide $Ca(CN)_2$ | 592-01-8 | P021 |
| Carbaryl | 1-Naphthalenol, methylcarbamate | 63-25-2 | U279 |
| Carbendazim | Carbamic acid, 1H-benzimidazol-2-yl, methyl ester | 10605-21-7 | U372 |
| Carbofuran | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate | 1563-66-2 | P127 |
| Carbofuran phenol | 7-Benzofuranol, 2,3-dihydro-2,2-dimethyl- | 1563-38-8 | U367 |
| Carbon disulfide | Same | 75-15-0 | P022 |
| Carbon oxyfluoride | Carbonic difluoride | 353-50-4 | U033 |
| Carbon tetrachloride | Methane, tetrachloro- | 56-23-5 | U211 |
| Carbosulfan | Carbamic acid, [(dibutylamino)thio]methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester | 55285-14-8 | P189 |
| Chloral | Acetaldehyde, trichloro- | 75-87-6 | U034 |
| Chlorambucil | Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]- | 305-03-3 | U035 |
| Chlordane | 4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro- | 57-74-9 | U036 |
| Chlordane (alpha and gamma isomers) | | | U036 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Chlorinated benzenes, N.O.S.[1] | | | |
| Chlorinated ethane, N.O.S.[1] | | | |
| Chlorinated fluorocarbons, N.O.S.[1] | | | |
| Chlorinated naphthalene, N.O.S.[1] | | | |
| Chlorinated phenol, N.O.S.[1] | | | |
| Chlornaphazin | Naphthalenamine, N,N'-bis(2-chloroethyl)- | 494-03-1 | U026 |
| Chloroacetaldehyde | Acetaldehyde, chloro- | 107-20-0 | P023 |
| Chloroalkyl ethers, N.O.S.[1] | | | |
| p-Chloroaniline | Benzenamine, 4-chloro- | 106-47-8 | P024 |
| Chlorobenzene | Benzene, chloro- | 108-90-7 | U037 |
| Chlorobenzilate | Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester | 510-15-6 | U038 |
| p-Chloro-m-cresol | Phenol, 4-chloro-3-methyl- | 59-50-7 | U039 |
| 2-Chloroethyl vinyl ether | Ethene, (2-chloroethoxy)- | 110-75-8 | U042 |
| Chloroform | Methane, trichloro- | 67-66-3 | U044 |
| Chloromethyl methyl ether | Methane, chloromethoxy- | 107-30-2 | U046 |
| beta-Chloronaphthalene | Naphthalene, 2-chloro- | 91-58-7 | U047 |
| o-Chlorophenol | Phenol, 2-chloro- | 95-57-8 | U048 |
| 1-(0-Chlorophenyl)thiourea | Thiourea, (2-chlorophenyl)- | 5344-82-1 | P026 |
| Chloroprene | 1,3-Butadiene, 2-chloro- | 126-99-8 | |
| 3-Chloropropionitrile | Propanenitrile, 3-chloro- | 542-76-7 | P027 |
| Chromium | Same | 7440-47-3 | |
| Chromium compounds, N.O.S.[1] | | | |
| Chrysene | Same | 218-01-9 | U050 |
| Citrus red No. 2 | 2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]- | 6358-53-8 | |
| Coal tar creosote | Same | 8007-45-2 | |
| Copper cyanide | Copper cyanide CuCN | 544-92-3 | P029 |
| Copper dimethyldithiocarbamate | Copper, bis(dimethylcarbamodithioato-S,S')-, | 137-29-1 | |
| Cresote | Same | | U051 |
| p-Cresidine | 2-Methoxy-5-methylbenzenamine | 120-71-8 | |
| Cresol (Cresylic acid) | Phenol, methyl- | 1319-77-3 | U052 |
| Crotonaldehyde | 2-Butenal | 4170-30-3 | U053 |
| m-Cumenyl methylcarbamate | Phenol, 3-(methylethyl)-, methylcarbamate | 64-00-6 | P202 |
| Cyanides (soluble salts and complexes) N.O.S.[1] | | | P030 |
| Cyanogen | Ethanedinitrile | 460-19-5 | P031 |
| Cyanogen bromide | Cyanogen bromide (CN)Br | 506-68-3 | U246 |
| Cyanogen chloride | Cyanogen chloride (CN)Cl | 506-77-4 | P033 |
| Cycasin | beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl | 14901-08-7 | |
| Cycloate | Carbamothioic acid, cyclophexylethyl-, S-ethyl ester | 1134-23-2 | |
| 2-Cyclohexyl-4,6-dinitrophenol | Phenol, 2-cyclohexyl-4,6-dinitro- | 131-89-5 | P034 |
| Cyclophosphamide | 2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide | 50-18-0 | U058 |
| 2,4-D | Acetic acid, (2,4-dichlorophenoxy)- | 94-75-7 | U240 |
| 2,4-D, salts, esters | | | U240 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Daunomycin | 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)- | 20830-81-3 | U059 |
| DDD | Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro- | 72-54-8 | U060 |
| DDE | Benzene, 1,1'-dichloroethenylidene)bis[4-chloro- | 72-55-9 | |
| DDT | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro- | 50-29-3 | U061 |
| Dazomet | 2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl | 533-74-4 | |
| Diallate | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester | 2303-16-4 | U062 |
| Dibenz[a,h]acridine | Same | 226-36-8 | |
| Dibenz[a,j]acridine | Same | 224-42-0 | |
| Dibenz[a,h]anthracene | Same | 53-70-3 | U063 |
| 7H-Dibenzo[c,g]carbazole | Same | 194-59-2 | |
| Dibenzo[a,e]pyrene | Naphtho[1,2,3,4-def]chrysene | 192-65-4 | |
| Dibenzo[a,h]pyrene | Dibenzo[b,def]chrysene | 189-64-0 | |
| Dibenzo[a,i]pyrene | Benzo[rst]pentaphene | 189-55-9 | U064 |
| 1,2-Dibromo-3-chloropropane | Propane, 1,2-dibromo-3-chloro- | 96-12-8 | U066 |
| Dibutyl phthalate | 1,2-Benzenedicarboxylic acid, dibutyl ester | 84-74-2 | U069 |
| o-Dichlorobenzene | Benzene, 1,2-dichloro- | 95-50-1 | U070 |
| m-Dichlorobenzene | Benzene, 1,3-dichloro- | 541-73-1 | U071 |
| p-Dichlorobenzene | Benzene, 1,4-dichloro- | 106-46-7 | U072 |
| Dichlorobenzene, N.O.S.[1] | Benzene, dichloro- | 25321-22-6 | |
| 3,3'-Dichlorobenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro- | 91-94-1 | U073 |
| 1,4-Dichloro-2-butene | 2-Butene, 1,4-dichloro- | 764-41-0 | U074 |
| Dichlorodifluoromethane | Methane, dichlorodifluoro- | 75-71-8 | U075 |
| Dichloroethylene, N.O.S.[1] | Dichloroethylene | 25323-30-2 | |
| 1,1-Dichloroethylene | Ethene, 1,1-dichloro- | 75-35-4 | U078 |
| 1,2-Dichloroethylene | Ethene, 1,2-dichloro-, (E)- | 156-60-5 | U079 |
| Dichloroethyl ether | Ethane, 1,1'-oxybis[2-chloro- | 111-44-4 | U025 |
| Dichloroisopropyl ether | Propane, 2,2'-oxybis[2-chloro- | 108-60-1 | U027 |
| Dichloromethoxy ethane | Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- | 111-91-1 | U024 |
| Dichloromethyl ether | Methane, oxybis[chloro- | 542-88-1 | P016 |
| 2,4-Dichlorophenol | Phenol, 2,4-dichloro- | 120-83-2 | U081 |
| 2,6-Dichlorophenol | Phenol, 2,6-dichloro- | 87-65-0 | U082 |
| Dichlorophenylarsine | Arsonous dichloride, phenyl- | 696-28-6 | P036 |
| Dichloropropane, N.O.S.[1] | Propane, dichloro- | 26638-19-7 | |
| Dichloropropanol, N.O.S.[1] | Propanol, dichloro- | 26545-73-3 | |
| Dichloropropene, N.O.S.[1] | 1-Propene, dichloro- | 26952-23-8 | |
| 1,3-Dichloropropene | 1-Propene, 1,3-dichloro- | 542-75-6 | U084 |
| Dieldrin | 2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a, 7,7aoctahydro-, (1aalpha,2beta,2aalpha, 3beta,6beta,6aalpha,7beta,7aalpha)- | 60-57-1 | P037 |
| 1,2:3,4-Diepoxybutane | 2,2'-Bioxirane | 1464-53-5 | U085 |
| Diethylarsine | Arsine, diethyl- | 692-42-2 | P038 |
| Diethylene glycol, dicarbamate | Ethanol, 2,2'-oxybis-, dicarbamate | 5952-26-1 | U395 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| 1,4-Diethyleneoxide | 1,4-Dioxane | 123-91-1 | U108 |
| Diethylhexyl phthalate | 1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester | 117-81-7 | U028 |
| N,N'-Diethylhydrazine | Hydrazine, 1,2-diethyl- | 1615-80-1 | U086 |
| O,O-Diethyl S-methyl dithiophosphate | Phosphorodithioic acid, O,O-diethyl S-methyl ester | 3288-58-2 | U087 |
| Diethyl-p-nitrophenyl phosphate | Phosphoric acid, diethyl 4-nitrophenyl ester | 311-45-5 | P041 |
| Diethyl phthalate | 1,2-Benzenedicarboxylic acid, diethyl ester | 84-66-2 | U088 |
| O,O-Diethyl O-pyrazinyl phosphoro-thioate | Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester | 297-97-2 | P040 |
| Diethylstilbesterol | Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)- | 56-53-1 | U089 |
| Dihydrosafrole | 1,3-Benzodioxole, 5-propyl- | 94-58-6 | U090 |
| Diisopropylfluorophosphate (DFP) | Phosphorofluoridic acid, bis(1-methylethyl) ester | 55-91-4 | P043 |
| Dimethoate | Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester | 60-51-5 | P044 |
| 3,3'-Dimethoxybenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- | 119-90-4 | U091 |
| p-Dimethylaminoazobenzene | Benzenamine, N,N-dimethyl-4-(phenylazo)- | 60-11-7 | U093 |
| 2,4-Dimethylaniline (2,4-xylidine) | Benzenamine, 2,4-dimethyl- | 95-68-1 | |
| 7,12-Dimethylbenz[a]anthracene | Benz[a]anthracene, 7,12-dimethyl- | 57-97-6 | U094 |
| 3,3'-Dimethylbenzidine | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl- | 119-93-7 | U095 |
| Dimethylcarbamoyl chloride | Carbamic chloride, dimethyl- | 79-44-7 | U097 |
| 1,1-Dimethylhydrazine | Hydrazine, 1,1-dimethyl- | 57-14-7 | U098 |
| 1,2-Dimethylhydrazine | Hydrazine, 1,2-dimethyl- | 540-73-8 | U099 |
| alpha, alpha-Dimethylphene thylamine | Benzeneethanamine, alpha, alpha-dimethyl- | 122-09-8 | P046 |
| 2,4-Dimethylphenol | Phenol, 2,4-dimethyl- | 105-67-9 | U101 |
| Dimethyl phthalate | 1,2-Benzenedicarboxylic acid, dimethyl ester | 131-11-3 | U102 |
| Dimethyl sulfate | Sulfuric acid, dimethyl ester | 77-78-1 | U103 |
| Dimetilan | Carbamic acid, dimethyl-, 1-[(dimethylamino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester | 644-64-4 | P191 |
| Dinitrobenzene, N.O.S.[1] | Benzene, dinitro- | 25154-54-5 | |
| 4,6-Dinitro-o-cresol | Phenol, 2-methyl-4,6-dinitro- | 534-52-1 | P047 |
| 4,6-Dintro-o-cresol salts | | | P047 |
| 2,4-Dinitrophenol | Phenol, 2,4-dinitro- | 51-28-5 | P048 |
| 2,4-Dinitrotoluene | Benzene, 1-methyl-2,4-dinitro- | 121-14-2 | U105 |
| 2,6-Dinitrotoluene | Benzene, 2-methyl-1,3-dinitro- | 606-20-2 | U106 |
| Dinoseb | Phenol, 2-(1-methylpropyl)-4,6-dinitro- | 88-85-7 | P020 |
| Di-n-octyl phthalate | 1,2-Benzenedicarboxylic acid, dioctyl ester | 117-84-0 | U107 |
| Diphenylamine | Benzenamine, N-phenyl- | 122-39-4 | |
| 1,2-Diphenylhydrazine | Hydrazine, 1,2-diphenyl- | 122-66-7 | U109 |
| Di-n-propylnitrosamine | 1-Propanamine, N-nitroso-N-propyl- | 621-64-7 | U111 |
| Disulfiram | Thioperoxydicarbonic diamide, tetraethyl | 97-77-8 | |
| Disulfoton | Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester | 298-04-4 | P039 |
| Dithiobiuret | Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$ | 541-53-7 | P049 |
| EPTC | Carbamothioic acid, dipropyl-, S-ethyl ester | 759-94-4 | |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Endosulfan | 6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9, 9a-hexahydro-, 3-oxide | 115-29-7 | P050 |
| Endothall | 7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid | 145-73-3 | P088 |
| Endrin | 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)- | 72-20-8 | P051 |
| Endrin metabolites | | | P051 |
| Epichlorohydrin | Oxirane, (chloromethyl)- | 106-89-8 | U041 |
| Epinephrine | 1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)- | 51-43-4 | P042 |
| Ethyl carbamate (urethane) | Carbamic acid, ethyl ester | 51-79-6 | U238 |
| Ethyl cyanide | Propanenitrile | 107-12-0 | P101 |
| Ethyl Ziram | Zinc, bis(diethylcarbamodithioato-S,S')- | 14324-55-1 | |
| Ethylenebisdithiocarbamic acid | Carbamodithioic acid, 1,2-ethanediylbis- | 111-54-6 | U114 |
| Ethylenebisdithiocarbamic acid, salts and esters | | | U114 |
| Ethylene dibromide | Ethane, 1,2-dibromo- | 106-93-4 | U067 |
| Ethylene dichloride | Ethane, 1,2-dichloro- | 107-06-2 | U077 |
| Ethylene glycol monoethyl ether | Ethanol, 2-ethoxy- | 110-80-5 | U359 |
| Ethyleneimine | Aziridine | 151-56-4 | P054 |
| Ethylene oxide | Oxirane | 75-21-8 | U115 |
| Ethylenethiourea | 2-Imidazolidinethione | 96-45-7 | U116 |
| Ethylidene dichloride | Ethane, 1,1-dichloro- | 75-34-3 | U076 |
| Ethyl methacrylate | 2-Propenoic acid, 2-methyl-, ethyl ester | 97-63-2 | U118 |
| Ethyl methanesulfonate | Methanesulfonic acid, ethyl ester | 62-50-0 | U119 |
| Famphur | Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester | 52-85-7 | P097 |
| Ferbam | Iron, tris(dimethylcarbamodithioato-S,S')-, | 14484-64-1 | |
| Fluoranthene | Same | 206-44-0 | U120 |
| Fluorine | Same | 7782-41-4 | P056 |
| Fluoroacetamide | Acetamide, 2-fluoro- | 640-19-7 | P057 |
| Fluoroacetic acid, sodium salt | Acetic acid, fluoro-, sodium salt | 62-74-8 | P058 |
| Formaldehyde | Same | 50-00-0 | U122 |
| Formetanate hydrochloride | Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)carbonyl]oxy] phenyl],- monohydrochloride | 23422-53-9 | P198 |
| Formic acid | Same | 64-18-6 | U123 |
| Formparante | Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino) carbonyl]oxy]phenyl]- | 17702-57-7 | p197 |
| Glycidylaldehyde | Oxiranecarboxyaldehyde | 765-34-4 | U126 |
| Halomethanes, N.O.S.[1] | | | |
| Heptachlor | 4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- | 76-44-8 | P059 |
| Heptachlor epoxide | 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)- | 1024-57-3 | |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Heptachlor epoxide (alpha, beta, and gamma isomers) | | | |
| Heptachlorodibenzofurans. | | | |
| Heptachlorodibenzo-p-dioxins | | | |
| Hexachlorobenzene | Benzene, hexachloro- | 118-74-1 | U127 |
| Hexachlorobutadiene | 1,3-Butadiene, 1,1,2,3,4,4-hexachloro- | 87-68-3 | U128 |
| Hexachlorocyclopentadiene | 1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro- | 77-47-4 | U130 |
| Hexachlorodibenzo-p-dioxins | | | |
| Hexachlorodibenzofurans | | | |
| Hexachloroethane | Ethane, hexachloro- | 67-72-1 | U131 |
| Hexachlorophene | Phenol, 2,2'-methylenebis[3,4,6-trichloro- | 70-30-4 | U132 |
| Hexachloropropene | 1-Propene, 1,1,2,3,3,3-hexachloro- | 1888-71-7 | U243 |
| Hexaethyl tetraphosphate | Tetraphosphoric acid, hexaethyl ester | 757-58-4 | P062 |
| Hydrazine | Same | 302-01-2 | U133 |
| Hydrogen cyanide | Hydrocyanic acid | 74-90-8 | P063 |
| Hydrogen fluoride | Hydrofluoric acid | 7664-39-3 | U134 |
| Hydrogen sulfide | Hydrogen sulfide $H_2S$ | 7783-06-4 | U135 |
| Indeno[1,2,3-cd]pyrene | Same | 193-39-5 | U137 |
| 3-Iodo-2-propynyl n-butylcarbamate | Carbamic acid, butyl-, 3-iodo-2-propynyl ester | 55406-53-6 | |
| Isobutyl alcohol | 1-Propanol, 2-methyl- | 78-83-1 | U140 |
| Isodrin | 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) - | 465-73-6 | P060 |
| Isolan | Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester | 119-38-0 | P192 |
| Isosafrole | 1,3-Benzodioxole, 5-(1-propenyl)- | 120-58-1 | U141 |
| Kepone | 1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro- | 143-50-0 | U142 |
| Lasiocarpine | 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]]- | 303-34-4 | U143 |
| Lead | Same | 7439-92-1 | |
| Lead compounds, N.O.S.[1] | | | |
| Lead acetate | Acetic acid, lead(2+) salt | 301-04-2 | U144 |
| Lead phosphate | Phosphoric acid, lead(2+) salt (2:3) | 7446-27-7 | U145 |
| Lead subacetate | Lead, bis(acetato-O)tetrahydroxytri- | 1335-32-6 | U146 |
| Lindane | Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- | 58-89-9 | U129 |
| Maleic anhydride | 2,5-Furandione | 108-31-6 | U147 |
| Maleic hydrazide | 3,6-Pyridazinedione, 1,2-dihydro- | 123-33-1 | U148 |
| Malononitrile | Propanedinitrile | 109-77-3 | U149 |
| Manganese dimethyldithiocarbamate | Manganese, bis(dimethylcarbamodithioato-S,S')-, | 15339-36-3 | P196 |
| Melphalan | L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]- | 148-82-3 | U150 |
| Mercury | Same | 7439-97-6 | U151 |
| Mercury compounds, N.O.S.[1] | | | |
| Mercury fulminate | Fulminic acid, mercury(2+) salt | 628-86-4 | P065 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Metam Sodium | Carbamodithioic acid, methyl-, monosodium salt | 137-42-8 | |
| Methacrylonitrile | 2-Propenenitrile, 2-methyl- | 126-98-7 | U152 |
| Methapyrilene | 1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- | 91-80-5 | U155 |
| Methiocarb | Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate | 2032-65-7 | P199 |
| Methomyl | Ethanimidothioic acid, N-[[(methylamino)carbonyl]oxy]-, methyl ester | 16752-77-5 | P066 |
| Methoxychlor | Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy- | 72-43-5 | U247 |
| Methyl bromide | Methane, bromo- | 74-83-9 | U029 |
| Methyl chloride | Methane, chloro- | 74-87-3 | U045 |
| Methyl chlorocarbonate | Carbonochloridic acid, methyl ester | 79-22-1 | U156 |
| Methyl chloroform | Ethane, 1,1,1-trichloro- | 71-55-6 | U226 |
| 3-Methylcholanthrene | Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- | 56-49-5 | U157 |
| 4,4'-Methylenebis(2-chloroaniline) | Benzenamine, 4,4'-methylenebis[2-chloro- | 101-14-4 | U158 |
| Methylene bromide | Methane, dibromo- | 74-95-3 | U068 |
| Methylene chloride | Methane, dichloro- | 75-09-2 | U080 |
| Methyl ethyl ketone (MEK) | 2-Butanone | 78-93-3 | U159 |
| Methyl ethyl ketone peroxide | 2-Butanone, peroxide | 1338-23-4 | U160 |
| Methyl hydrazine | Hydrazine, methyl- | 60-34-4 | P068 |
| Methyl iodide | Methane, iodo- | 74-88-4 | U138 |
| Methyl isocyanate | Methane, isocyanato- | 624-83-9 | P064 |
| 2-Methyllactonitrile | Propanenitrile, 2-hydroxy-2-methyl- | 75-86-5 | P069 |
| Methyl methacrylate | 2-Propenoic acid, 2-methyl-, methyl ester | 80-62-6 | U162 |
| Methyl methanesulfonate | Methanesulfonic acid, methyl ester | 66-27-3 | |
| Methyl parathion | Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester | 298-00-0 | P071 |
| Methylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- | 56-04-2 | U164 |
| Metolcarb | Carbamic acid, methyl-, 3-methylphenyl ester | 1129-41-5 | P190 |
| Mexacarbate | Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester) | 315-18-4 | P128 |
| Mitomycin C | 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)]- | 50-07-7 | U010 |
| MNNG | Guanidine, N-methyl-N'-nitro-N-nitroso- | 70-25-7 | U163 |
| Molinate | 1H-Azepine-1-carbothioic acid, hexahydro-, S- ethyl ester | 2212-67-1 | |
| Mustard gas | Ethane, 1,1'-thiobis[2-chloro- | 505-60-2 | |
| Naphthalene | Same | 91-20-3 | U165 |
| 1,4-Naphthoquinone | 1,4-Naphthalenedione | 130-15-4 | U166 |
| alpha-Naphthylamine | 1-Naphthalenamine | 134-32-7 | U167 |
| beta-Naphthylamine | 2-Naphthalenamine | 91-59-8 | U168 |
| alpha-Naphthylthiourea | Thiourea, 1-naphthalenyl- | 86-88-4 | P072 |
| Nickel | Same | 7440-02-0 | |
| Nickel compounds, N.O.S.[1] | | | |
| Nickel carbonyl | Nickel carbonyl $Ni(CO)_4$, (T-4)- | 13463-39-3 | P073 |
| Nickel cyanide | Nickel cyanide $Ni(CN)_2$ | 557-19-7 | P074 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Nicotine | Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (This listing does not include patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies.) | 54-11-5 | P075 |
| Nicotine salts | | | P075 |
| Nitric oxide | Nitrogen oxide NO | 10102-43-9 | P076 |
| p-Nitroaniline | Benzenamine, 4-nitro- | 100-01-6 | P077 |
| Nitrobenzene | Benzene, nitro- | 98-95-3 | U169 |
| Nitrogen dioxide | Nitrogen oxide $NO_2$ | 10102-44-0 | P078 |
| Nitrogen mustard | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl- | 51-75-2 | |
| Nitrogen mustard, hydrochloride salt | | | |
| Nitrogen mustard N-oxide | Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide | 126-85-2 | |
| Nitrogen mustard, N-oxide, hydrochloride salt | | | |
| Nitroglycerin | 1,2,3-Propanetriol, trinitrate | 55-63-0 | P081 |
| p-Nitrophenol | Phenol, 4-nitro- | 100-02-7 | U170 |
| 2-Nitropropane | Propane, 2-nitro- | 79-46-9 | U171 |
| Nitrosamines, N.O.S.[1] | | 35576-91-1 | |
| N-Nitrosodi-n-butylamine | 1-Butanamine, N-butyl-N-nitroso- | 924-16-3 | U172 |
| N-Nitrosodiethanolamine | Ethanol, 2,2'-(nitrosoimino)bis- | 1116-54-7 | U173 |
| N-Nitrosodiethylamine | Ethanamine, N-ethyl-N-nitroso- | 55-18-5 | U174 |
| N-Nitrosodimethylamine | Methanamine, N-methyl-N-nitroso- | 62-75-9 | P082 |
| N-Nitroso-N-ethylurea | Urea, N-ethyl-N-nitroso- | 759-73-9 | U176 |
| N-Nitrosomethylethylamine | Ethanamine, N-methyl-N-nitroso- | 10595-95-6 | |
| N-Nitroso-N-methylurea | Urea, N-methyl-N-nitroso- | 684-93-5 | U177 |
| N-Nitroso-N-methylurethane | Carbamic acid, methylnitroso-, ethyl ester | 615-53-2 | U178 |
| N-Nitrosomethylvinylamine | Vinylamine, N-methyl-N-nitroso- | 4549-40-0 | P084 |
| N-Nitrosomorpholine | Morpholine, 4-nitroso- | 59-89-2 | |
| N-Nitrosonornicotine | Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)- | 16543-55-8 | |
| N-Nitrosopiperidine | Piperidine, 1-nitroso- | 100-75-4 | U179 |
| N-Nitrosopyrrolidine | Pyrrolidine, 1-nitroso- | 930-55-2 | U180 |
| N-Nitrososarcosine | Glycine, N-methyl-N-nitroso- | 13256-22-9 | |
| 5-Nitro-O-toluidine | Benzenamine, 2-methyl-5-nitro- | 99-55-8 | U181 |
| Octachlorodibenzo-p-dioxin (OCDD) | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | 3268-87-9 | |
| Octachlorodibenzofuran (OCDF) | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran | 39001-02-0 | |
| Octamethylpyrophosphoramide | Diphosphoramide, octamethyl- | 152-16-9 | P085 |
| Osmium tetroxide | Osmium oxide $OsO_4$, (T-4)- | 20816-12-0 | P087 |
| Oxamyl | Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester | 23135-22-0 | P194 |
| Paraldehyde | 1,3,5-Trioxane, 2,4,6-trimethyl- | 123-63-7 | U182 |
| Parathion | Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester | 56-38-2 | P089 |
| Pebulate | Carbamothioic acid, butylethyl-, S-propyl ester | 1114-71-2 | |
| Pentachlorobenzene | Benzene, pentachloro- | 608-93-5 | U183 |
| Pentachlorodibenzo-p-dioxins | | | |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Pentachlorodibenzofurans | | | |
| Pentachloroethane | Ethane, pentachloro- | 76-01-7 | U184 |
| Pentachloronitrobenzene (PCNB) | Benzene, pentachloronitro- | 82-68-8 | U185 |
| Pentachlorophenol | Phenol, pentachloro- | 87-86-5 | See F027 |
| Phenacetin | Acetamide, N-(4-ethoxyphenyl)- | 62-44-2 | U187 |
| Phenol | Same | 108-95-2 | U188 |
| Phenylenediamine | Benzenediamine | 25265-76-3 | |
| 1,2-Phenylenediamine | 1,2-Benzenediamine | 95-54-5 | |
| 1,3-Phenylenediamine | 1,3-Benzenediamine | 108-45-2 | |
| Phenylmercury acetate | Mercury, (acetato-O)phenyl- | 62-38-4 | P092 |
| Phenylthiourea | Thiourea, phenyl- | 103-85-5 | P093 |
| Phosgene | Carbonic dichloride | 75-44-5 | P095 |
| Phosphine | Same | 7803-51-2 | P096 |
| Phorate | Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester | 298-02-2 | P094 |
| Phthalic acid esters, N.O.S.[1] | | | |
| Phthalic anhydride | 1,3-Isobenzofurandione | 85-44-9 | U190 |
| Physostigmine | Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- | 57-47-6 | P204 |
| Physostigmine salicylate | 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) | 57-64-7 | P188 |
| 2-Picoline | Pyridine, 2-methyl- | 109-06-8 | U191 |
| Polychlorinated biphenyls, N.O.S.[1] | | | |
| Potassium cyanide | Potassium cyanide K(CN) | 151-50-8 | P098 |
| Potassium dimethyl-dithiocarbamate | Carbamodithioic acid, dimethyl, potassium salt | 128-03-0 | |
| Potassium n-hydroxymethyl-n-methyl-dithiocarbamate | Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt | 51026-28-9 | |
| Potassium n-methyldithiocarbamate | Carbamodithioic acid, methyl-monopotassium salt | 137-41-7 | U377 |
| Potassium pentachlorophenate | Pentachlorophenol, potassium salt | 7778-73-6 | |
| Potassium silver cyanide | Argentate(1-), bis(cyano-C)-, potassium | 506-61-6 | P099 |
| Promecarb | Phenol, 3-methyl-5-(1-methylethyl)-, methylcarbamate | 2631-37-0 | P201 |
| Pronamide | Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)- | 23950-58-5 | U192 |
| 1,3-Propane sultone | 1,2-Oxathiolane, 2,2-dioxide | 1120-71-4 | U193 |
| Propham | Carbamic acid, phenyl-, 1-methylethyl ester | 122-42-9 | U373 |
| n-Propylamine | 1-Propanamine | 107-10-8 | U194 |
| Propargyl alcohol | 2-Propyn-1-ol | 107-19-7 | P102 |
| Propylene dichloride | Propane, 1,2-dichloro- | 78-87-5 | U083 |
| 1,2-Propylenimine | Aziridine, 2-methyl- | 75-55-8 | P067 |
| Propylthiouracil | 4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo- | 51-52-5 | |
| Propoxur | Phenol, 2-(1-methylethoxy)-,methylcarbamate | 114-26-1 | U411 |
| Prosulfocarb | Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester | 52888-80-9 | U387 |
| Pyridine | Same | 110-86-1 | U196 |
| Reserpine | Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl) oxy]-methyl ester, (3beta,16beta,17alpha, 18beta,20alpha)- | 50-55-5 | U200 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Resorcinol | 1,3-Benzenediol | 108-46-3 | U201 |
| Safrole | 1,3-Benzodioxole, 5-(2-propenyl)- | 94-59-7 | U203 |
| Selenium | Same | 7782-49-2 | |
| Selenium compounds, N.O.S.[1] | | | |
| Selenium dioxide | Selenious acid | 7783-00-8 | U204 |
| Selenium sulfide | Selenium sulfide $SeS_2$ | 7488-56-4 | U205 |
| Selenium, tetrakis (dimethyl-dithiocarbamate) | Carbamodithioic acid, dimethyl-, tetraanhydro-sulfide with orthothioselenious acid | 144-34-3 | |
| Selenourea | Same | 630-10-4 | P103 |
| Silver | Same | 7440-22-4 | |
| Silver compounds, N.O.S.[1] | | | |
| Silver cyanide | Silver cyanide Ag(CN) | 506-64-9 | P104 |
| Silvex (2,4,5-TP) | Propanoic acid, 2-(2,4,5-trichlorophenoxy)- | 93-72-1 | See F027 |
| Sodium cyanide | Sodium cyanide Na(CN) | 143-33-9 | P106 |
| Sodium dibutyldithiocarbamate | Carbamodithioic acid, dibutyl, sodium salt | 136-30-1 | |
| Sodium diethyldithiocarbamate | Carbamodithioic acid, diethyl-, sodium salt | 148-18-5 | |
| Sodium dimethyldithiocarbamate | Carbamodithioic acid, dimethyl-, sodium salt | 128-04-1 | |
| Sodium pentachlorophenate | Pentachlorophenol, sodium salt | 131-52-2 | |
| Streptozotocin | D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)carbonyl]amino]- | 18883-66-4 | U206 |
| Strychnine | Strychnidin-10-one | 57-24-9 | P108 |
| Strychnine salts | | | P108 |
| Sulfallate | Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester | 95-06-7 | |
| TCDD | Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro- | 1746-01-6 | |
| Tetrabutylthiuram disulfide | Thioperoxydicarbonic diamide, tetrabutyl | 1634-02-2 | |
| Tetramethylthiuram monosulfide | Bis (dimethylthiocarbamoyl) sulfide | 97-74-5 | |
| 1,2,4,5-Tetrachlorobenzene | Benzene, 1,2,4,5-tetrachloro- | 95-94-3 | U207 |
| Tetrachlorodibenzo-p-dioxins | | | |
| Tetrachlorodibenzofurans | | | |
| Tetrachloroethane, N.O.S.[1] | Ethane, tetrachloro-, N.O.S. | 25322-20-7 | |
| 1,1,1,2-Tetrachloroethane | Ethane, 1,1,1,2-tetrachloro- | 630-20-6 | U208 |
| 1,1,2,2-Tetrachloroethane | Ethane, 1,1,2,2-tetrachloro- | 79-34-5 | U209 |
| Tetrachloroethylene | Ethene, tetrachloro- | 127-18-4 | U210 |
| 2,3,4,6-Tetrachlorophenol | Phenol, 2,3,4,6-tetrachloro- | 58-90-2 | See F027 |
| 2,3,4,6-Tetrachlorophenol, potassium salt | Same | 53535-27-6 | |
| 2,3,4,6-Tetrachlorophenol, sodium salt | Same | 25567-55-9 | |
| Tetraethyldithiopyrophosphate | Thiodiphosphoric acid, tetraethyl ester | 3689-24-5 | P109 |
| Tetraethyl lead | Plumbane, tetraethyl- | 78-00-2 | P110 |
| Tetraethyl pyrophosphate | Diphosphoric acid, tetraethyl ester | 107-49-3 | P111 |
| Tetranitromethane | Methane, tetranitro- | 509-14-8 | P112 |
| Thallium | Same | 7440-28-0 | |
| Thallium compounds, N.O.S.[1] | | | |
| Thallic oxide | Thallium oxide $Tl_2O_3$ | 1314-32-5 | P113 |
| Thallium(I) acetate | Acetic acid, thallium(1+) salt | 563-68-8 | U214 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Thallium(I) carbonate | Carbonic acid, dithallium(1+) salt | 6533-73-9 | U215 |
| Thallium(I) chloride | Thallium chloride TICI | 7791-12-0 | U216 |
| Thallium(I) nitrate | Nitric acid, thallium(1+) salt | 10102-45-1 | U217 |
| Thallium(I) selenite | Selenious acid, dithallium(1+) salt | 12039-52-0 | P114 |
| Thallium(I) sulfate | Sulfuric acid, dithallium(1+) salt | 7446-18-6 | P115 |
| Thioacetamide | Ethanethioamide | 62-55-5 | U218 |
| Thiodicarb | Ethanimidothioic acid, N,N'-[thiobis[(methylimino) carbonyloxy]]bis-, dimethyl ester | 59669-26-0 | U410 |
| Thiofanox | 2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime | 39196-18-4 | P045 |
| Thiomethanol | Methanethiol | 74-93-1 | U153 |
| Thiophanate-methyl | Carbamic acid, [1,2-phyenylenebis (iminocarbonothioyl)]bis-, dimethyl ester | 23564-05-8 | U409 |
| Thiophenol | Benzenethiol | 108-98-5 | P014 |
| Thiosemicarbazide | Hydrazinecarbothioamide | 79-19-6 | P116 |
| Thiourea | Same | 62-56-6 | U219 |
| Thiram | Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$, tetramethyl- | 137-26-8 | U244 |
| Tirpate | 1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)carbonyl] oxime. | 26419-73-8 | P185 |
| Toluene | Benzene, methyl- | 108-88-3 | U220 |
| Toluenediamine | Benzenediamine, ar-methyl- | 25376-45-8 | U221 |
| Toluene-2,4-diamine | 1,3-Benzenediamine, 4-methyl- | 95-80-7 | |
| Toluene-2,6-diamine | 1,3-Benzenediamine, 2-methyl- | 823-40-5 | |
| Toluene-3,4-diamine | 1,2-Benzenediamine, 4-methyl- | 496-72-0 | |
| Toluene diisocyanate | Benzene, 1,3-diisocyanatomethyl- | 26471-62-5 | U223 |
| o-Toluidine | Benzenamine, 2-methyl- | 95-53-4 | U328 |
| o-Toluidine hydrochloride | Benzenamine, 2-methyl-, hydrochloride | 636-21-5 | U222 |
| p-Toluidine | Benzenamine, 4-methyl- | 106-49-0 | U353 |
| Toxaphene | Same | 8001-35-2 | P123 |
| Triallate | Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester | 2303-17-5 | U389 |
| 1,2,4-Trichlorobenzene | Benzene, 1,2,4-trichloro- | 120-82-1 | |
| 1,1,2-Trichloroethane | Ethane, 1,1,2-trichloro- | 79-00-5 | U227 |
| Trichloroethylene | Ethene, trichloro- | 79-01-6 | U228 |
| Trichloromethanethiol | Methanethiol, trichloro- | 75-70-7 | P118 |
| Trichloromonofluoromethane | Methane, trichlorofluoro- | 75-69-4 | U121 |
| 2,4,5-Trichlorophenol | Phenol, 2,4,5-trichloro- | 95-95-4 | See F027 |
| 2,4,6-Trichlorophenol | Phenol, 2,4,6-trichloro- | 88-06-2 | See F027 |
| 2,4,5-T | Acetic acid, (2,4,5-trichlorophenoxy)- | 93-76-5 | See F027 |
| Trichloropropane, N.O.S.[1] | | 25735-29-9 | |
| 1,2,3-Trichloropropane | Propane, 1,2,3-trichloro- | 96-18-4 | |
| Triethylamine | Ethanamine, N,N-diethyl- | 121-44-8 | U404 |
| O,O,O-Triethyl phosphorothioate | Phosphorothioic acid, O,O,O-triethyl ester | 126-68-1 | |
| 1,3,5-Trinitrobenzene | Benzene, 1,3,5-trinitro- | 99-35-4 | U234 |
| Tris(1-aziridinyl) phosphine sulfide | Aziridine, 1,1',1"-phosphinothioylidynetris- | 52-24-4 | |
| Tris(2,3-dibromopropyl) phosphate | 1-Propanol, 2,3-dibromo-, phosphate (3:1) | 126-72-7 | U235 |

| Common Name | Chemical Abstracts Name | Chemical Abstracts No. | Hazardous Waste No. |
|---|---|---|---|
| Trypan blue | 2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]-bis[5-amino-4-hydroxy-, tetrasodium salt | 72-57-1 | U236 |
| Uracil mustard | 2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]- | 66-75-1 | U237 |
| Vanadium pentoxide | Vanadium oxide $V_2O_5$ | 1314-62-1 | P120 |
| Vernolate | Carbamothioic acid, dipropyl-, S-propyl ester | 1929-77-7 | |
| Vinyl chloride | Ethene, chloro- | 75-01-4 | U043 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3% | 81-81-2 | U248 |
| Warfarin | 2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3% | 81-81-2 | P001 |
| Warfarin salts, when present at concentrations less than 0.3% | | | U248 |
| Warfarin salts, when present at concentrations greater than 0.3% | | | P001 |
| Zinc cyanide | Zinc cyanide $Zn(CN)_2$ | 557-21-1 | P121 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations greater than 10% | 1314-84-7 | P122 |
| Zinc phosphide | Zinc phosphide $Zn_3P_2$, when present at concentrations of 10% or less | 1314-84-7 | U249 |
| Ziram | Zinc, bis(dimethylcarbamodithioato -S,S')-, | 137-30-4 | P205 |

**FOOTNOTE: [1]The 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.**

| Facility | Address | Waste Description |
|---|---|---|

[Reserved]

**Table 2. Wastes Excluded From Specific Sources.**

| Facility | Address | Waste Description |
|---|---|---|

[Reserved]

**Table 3. Wastes Excluded From Commercial Chemical Products, Off-Specification Species, Container Residues, and Soil Residues Thereof.**

| Facility | Address | Waste Description |
|---|---|---|

[Reserved]

## APPENDIX VII

**[Reserved]**